FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
9 in.	f/4.5	2.25 in. x 2.25 in.	Bausch & Lomb, Inc.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0	2.5	5	7.5	10													

FILM Super XX TARGET CONTRAST High FILTER W-12

RADIAL	60	50	50	45	30													
TANGENTIAL	53	38	26	22	15													

AWAR 36 L/mm

FILM ____ TARGET CONTRAST ____ FILTER ____

RADIAL																		
TANGENTIAL																		

AWAR ____ L/mm

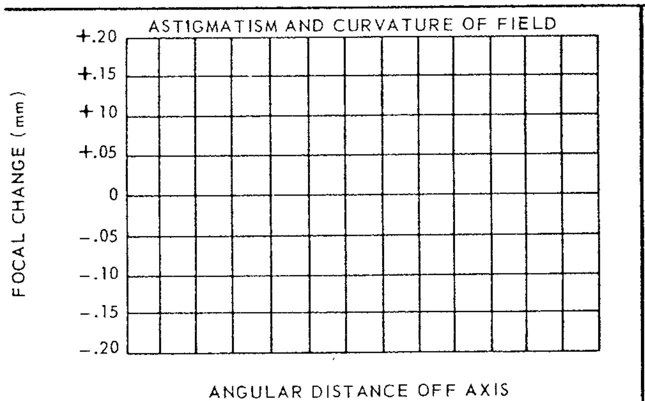
FILM ____ TARGET CONTRAST ____ FILTER ____

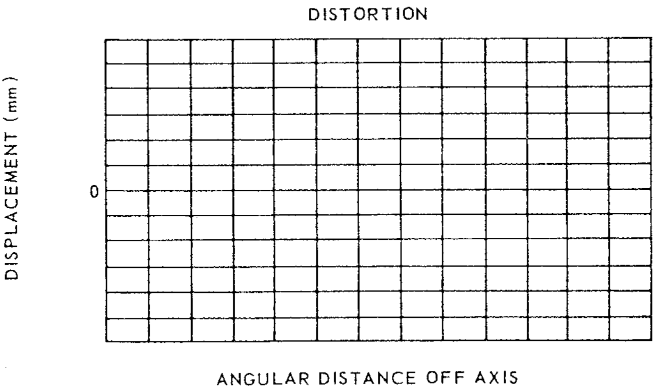
RADIAL																		
TANGENTIAL																		

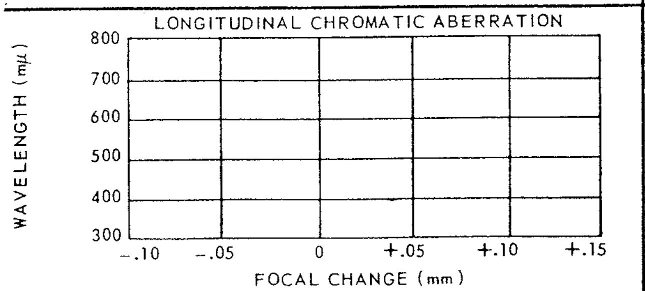
AWAR ____ L/mm

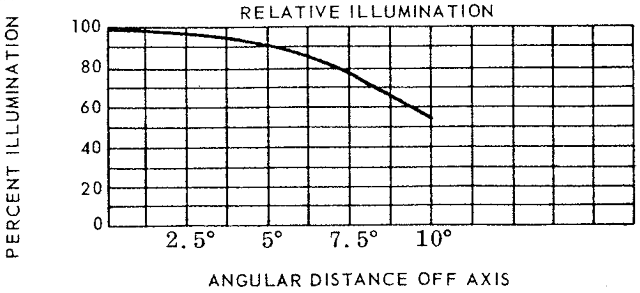
VISUAL ____ TARGET CONTRAST ____ FILTER ____

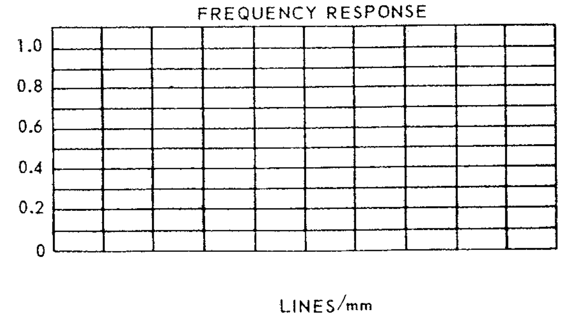
RADIAL																		
TANGENTIAL																		

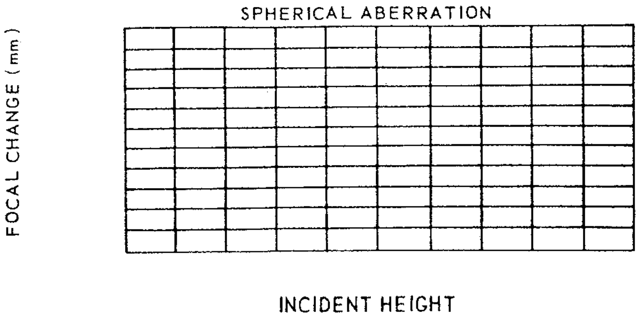












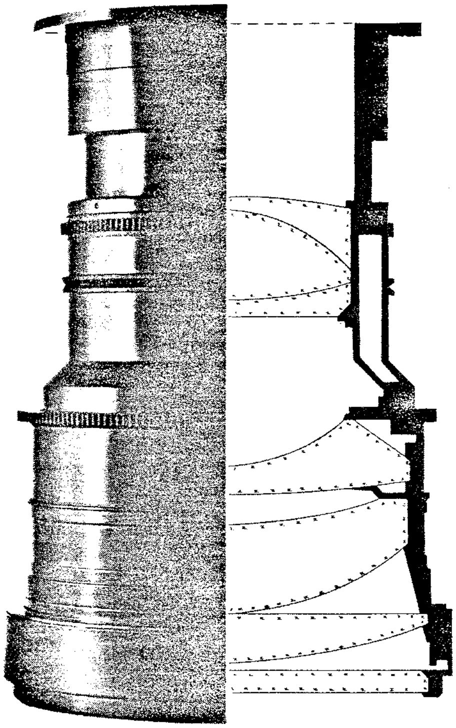
LENS DATA INFORMATION SHEET *(Reference MIL-STD-150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME Falconar

FOCAL LENGTH 10 in. (250 mm)	RELATIVE APERTURE f/1.8	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Wild Heerbrugg

STOCK NO.	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 10 in. (250 mm)	TRANSMITTANCE
BACK FOCAL DISTANCE 4.9 in. (124.5 mm)	COLOR CORRECTION Visible
FRONT VERTEX BACK FOCAL DISTANCE	DISTORTION *(Maximum)* 0.2%
FLANGE FOCAL DISTANCE 7.87 in. (200 mm)	LENS CELL DIAMETER *(Maximum)* 6.18 in. (157 mm)
SEMI-FIELD ANGLE 12.5°	OVERALL LENGTH 9.84 in. (250 mm)
RELATIVE APERTURE f/1.8	WEIGHT 19 lbs

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
10 in. (250 mm)	f/1.8	2.25 in. x 2.25 in.	Wild Heerbrugg

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0	2.5	5	7.5	10	12.5												

FILM Gevapan 30 TARGET CONTRAST High FILTER ____

RADIAL	46	46	45	33	28	25												
TANGENTIAL	46	46	30	33	28	28												

AWAR ____ L/mm

FILM ____ TARGET CONTRAST ____ FILTER ____

RADIAL																		
TANGENTIAL																		

AWAR ____ L/mm

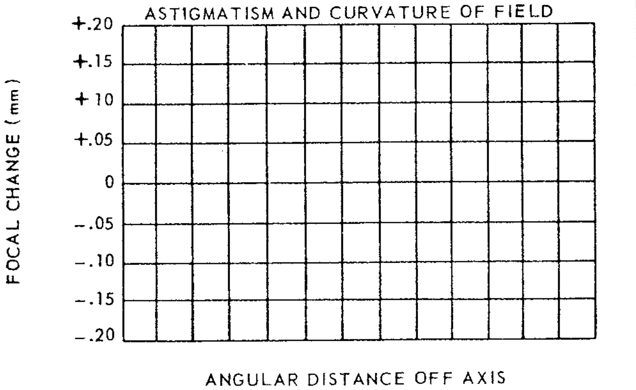
FILM ____ TARGET CONTRAST ____ FILTER ____

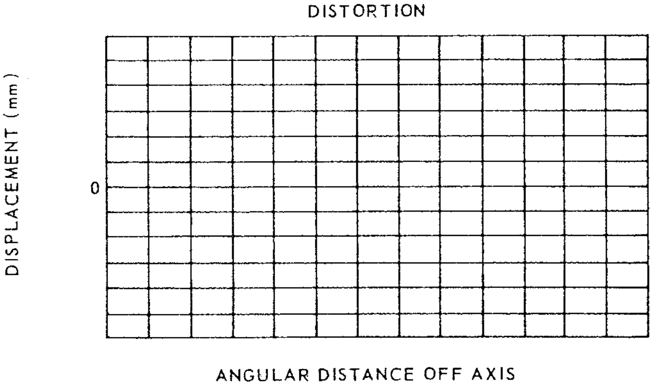
RADIAL																		
TANGENTIAL																		

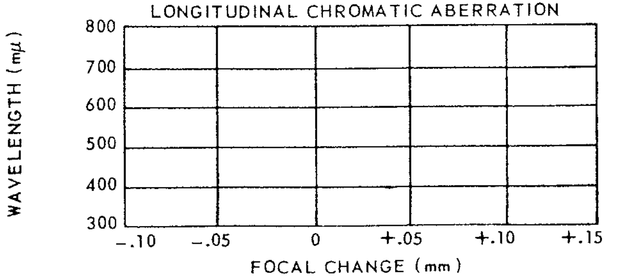
AWAR ____ L/mm

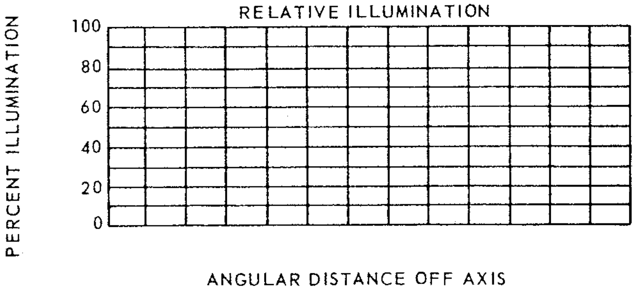
VISUAL ____ TARGET CONTRAST ____ FILTER ____

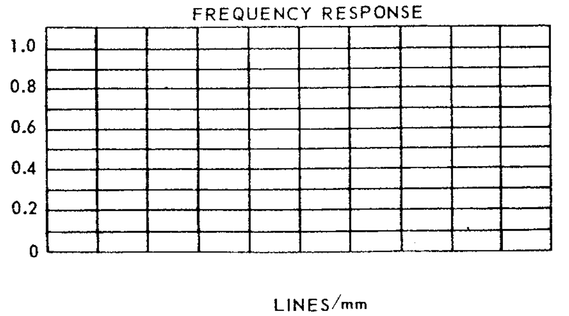
RADIAL																		
TANGENTIAL																		

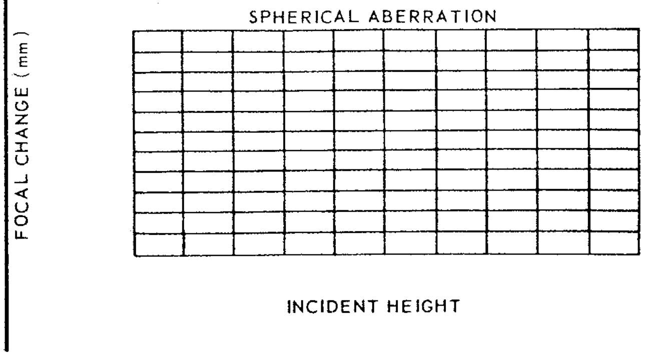

ASTIGMATISM AND CURVATURE OF FIELD


DISTORTION


LONGITUDINAL CHROMATIC ABERRATION


RELATIVE ILLUMINATION


FREQUENCY RESPONSE


SPHERICAL ABERRATION

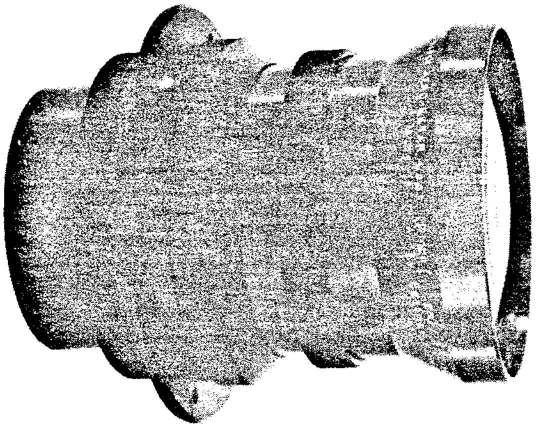
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME Aero Ektar

FOCAL LENGTH 12 in.	RELATIVE APERTURE f/3.5	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Eastman Kodak Co.

STOCK NO. Eastman Kodak P/N SK-9898-15B	SPECIFICATION NO.	STATUS Special Order

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 12 in. (304.04 mm)	TRANSMITTANCE 75%
BACK FOCAL DISTANCE 8.93 in. (226.89 mm)	COLOR CORRECTION
FRONT VERTEX BACK FOCAL DISTANCE 14.06 in. (357.35 mm)	DISTORTION *(Maximum)*
FLANGE FOCAL DISTANCE 10.060 in.	LENS CELL DIAMETER *(Maximum)* 4.100 in.
SEMI-FIELD ANGLE 12.5°	OVERALL LENGTH 5.435 in.
RELATIVE APERTURE f/3.5	WEIGHT 4 lbs 12 oz

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
12 in.	f/3.5	2.25 in. x 2.25 in.	Eastman Kodak Co.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0	2.5	5	7.5	10	12.5												

FILM Recordak Microfile TARGET CONTRAST ______ FILTER W-12

AVERAGE RADIAL AND TANGENTIAL	162	162	97	89	55	6												

AWAR ______ L/mm

FILM SO-121 TARGET CONTRAST ______ FILTER W-12

AVERAGE RADIAL AND TANGENTIAL	91	81	57	56	40	10												

AWAR ______ L/mm

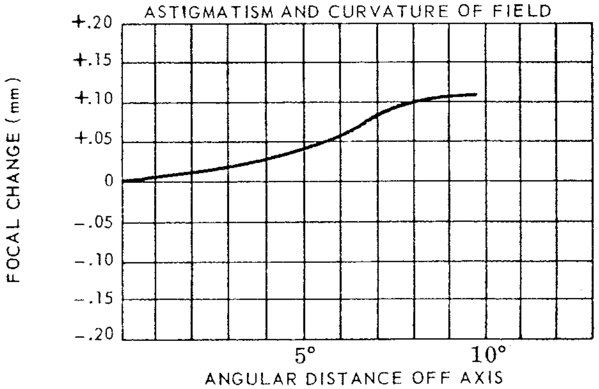
FILM ______ TARGET CONTRAST ______ FILTER ______

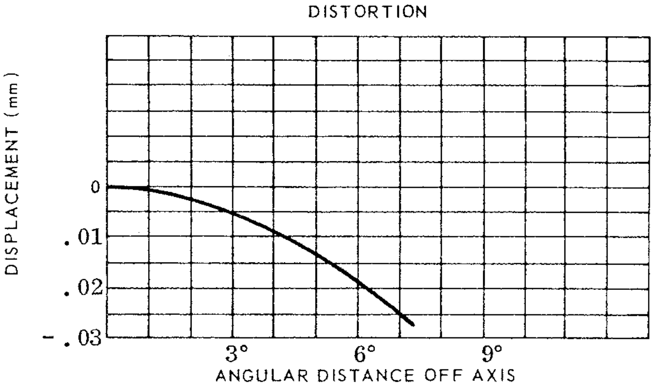
AVERAGE RADIAL AND TANGENTIAL																		

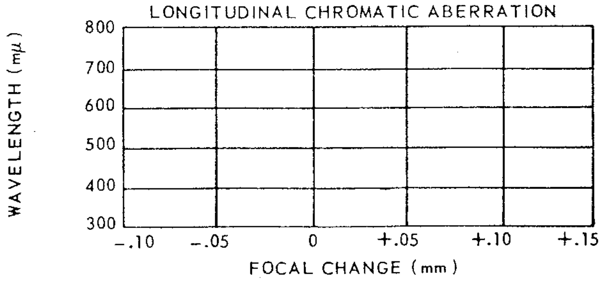
AWAR ______ L/mm

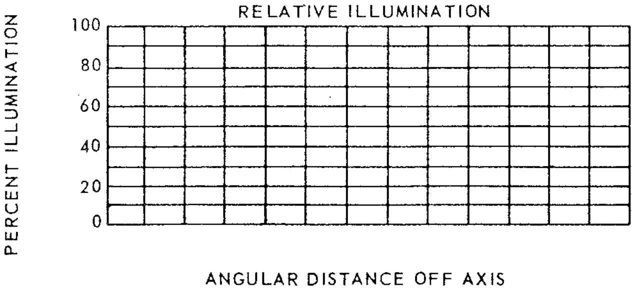
VISUAL ______ TARGET CONTRAST ______ FILTER ______

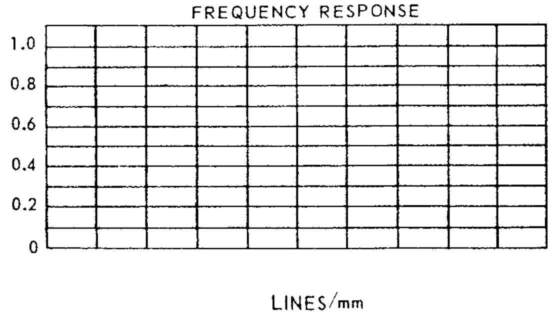
RADIAL																		
TANGENTIAL																		

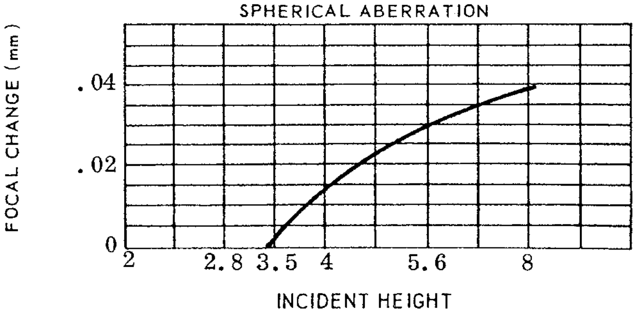

ASTIGMATISM AND CURVATURE OF FIELD


DISTORTION


LONGITUDINAL CHROMATIC ABERRATION


RELATIVE ILLUMINATION


FREQUENCY RESPONSE


SPHERICAL ABERRATION

LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL–STD–150A) Type I Aerial Reconnaissance	NAME

FOCAL LENGTH 12 in.	RELATIVE APERTURE f/3.8	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Fairchild Space & Defense Systems, El Segundo

STOCK NO. Fairchild P/N 13013-MA	SPECIFICATION NO.	STATUS Production

GENERAL DESCRIPTION

CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 12 in. (304.8 mm)	TRANSMITTANCE 75%
BACK FOCAL DISTANCE 8.0631 in.	COLOR CORRECTION Wratten 12
FRONT VERTEX BACK FOCAL DISTANCE 16.4037 in.	DISTORTION *(Maximum)*
FLANGE FOCAL DISTANCE	LENS CELL DIAMETER *(Maximum)*
SEMI–FIELD ANGLE 7.55°	OVERALL LENGTH 16.4037 in.
RELATIVE APERTURE f/3.8	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
12 in.	f/3.8	2.25 in. x 2.25 in.	Fairchild Space & Defense Systems, El Segundo

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0		3.78		5.3		7.55											

FILM Plus X Aerecon TARGET CONTRAST ______ FILTER ______

RADIAL	102		102		90		70											
TANGENTIAL	102		91		71		76											

AWAR ______ L/mm

FILM Panatomic X TARGET CONTRAST ______ FILTER ______

RADIAL	113		110		110		100											
TANGENTIAL	113		128		126		125											

AWAR ______ L/mm

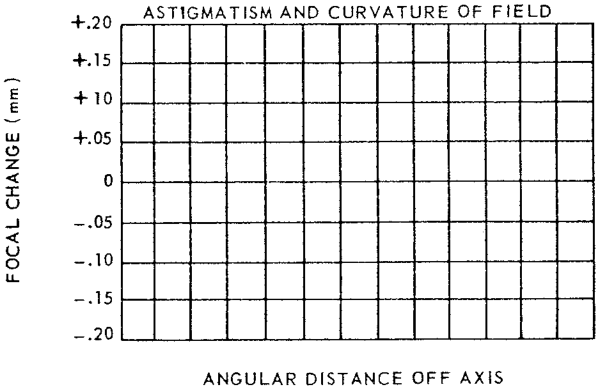
FILM ______ TARGET CONTRAST ______ FILTER ______

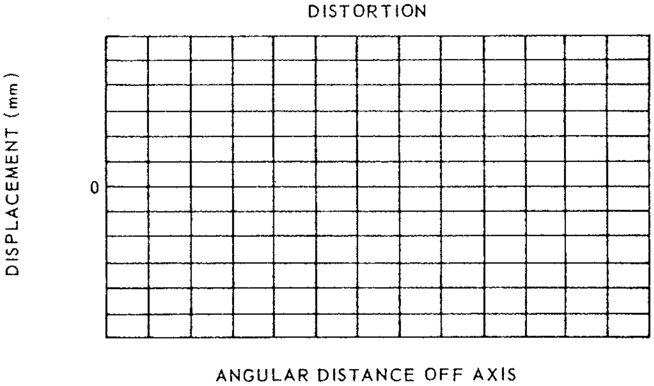
RADIAL																		
TANGENTIAL																		

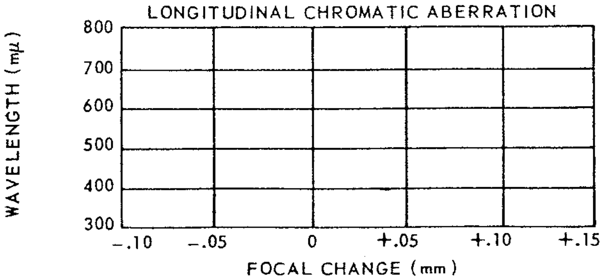
AWAR ______ L/mm

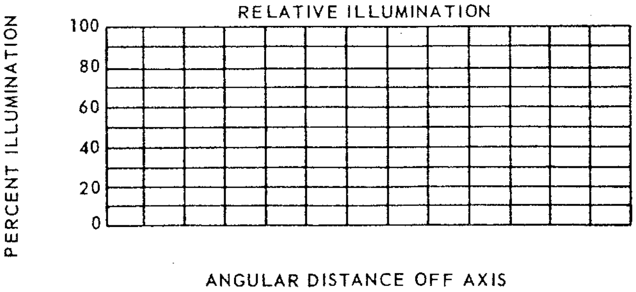
VISUAL ______ TARGET CONTRAST ______ FILTER ______

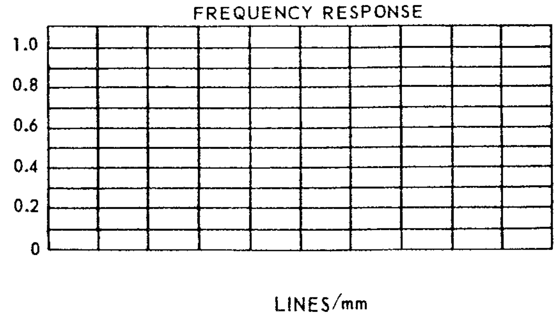
RADIAL																		
TANGENTIAL																		

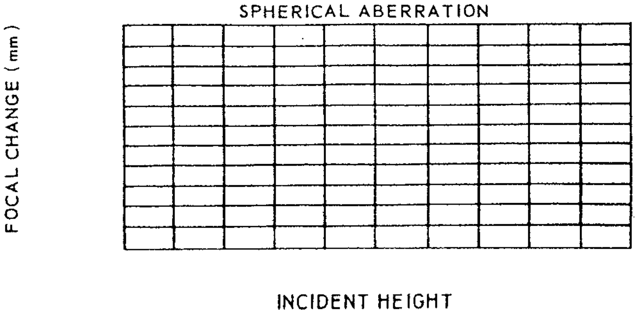












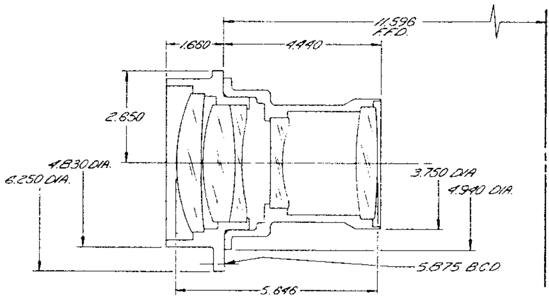
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL–STD–150A) Type I Aerial Reconnaissance	NAME Paxar Omicron

FOCAL LENGTH 12 in.	RELATIVE APERTURE f/3.8	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Pacific Optical Corp.

STOCK NO. Pacific Optical P/N 33060	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 12 in. (304.8 mm)	TRANSMITTANCE 75%
BACK FOCAL DISTANCE 7.27 in.	COLOR CORRECTION
FRONT VERTEX BACK FOCAL DISTANCE 12.688 in.	DISTORTION *(Maximum)*
FLANGE FOCAL DISTANCE 11.596 in.	LENS CELL DIAMETER *(Maximum)* 6.250 in.
SEMI-FIELD ANGLE 7.5°	OVERALL LENGTH 6.10 in.
RELATIVE APERTURE f/3.8	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
12 in.	f/3.8	2.25 in. x 2.25 in.	Pacific Optical Corp.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0	5	7.5															

FILM Plus X TARGET CONTRAST High FILTER W-12

RADIAL	45	45	40															
TANGENTIAL	45	45	45															

AWAR ______ L/mm

FILM ______ TARGET CONTRAST ______ FILTER ______

RADIAL																		
TANGENTIAL																		

AWAR ______ L/mm

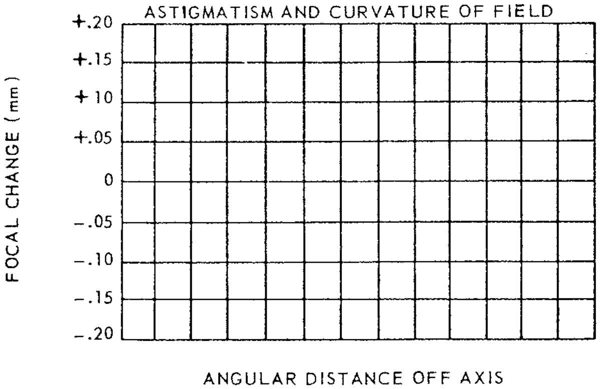
FILM ______ TARGET CONTRAST ______ FILTER ______

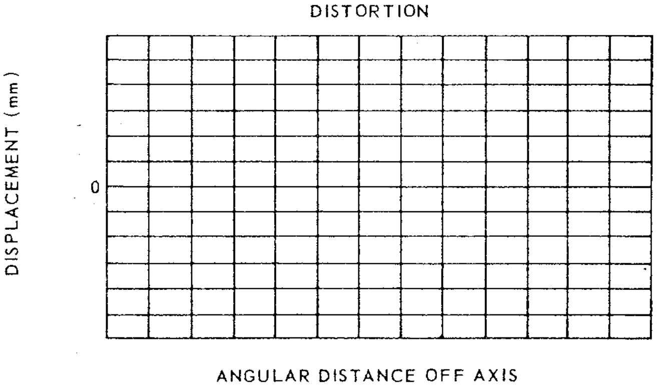
RADIAL																		
TANGENTIAL																		

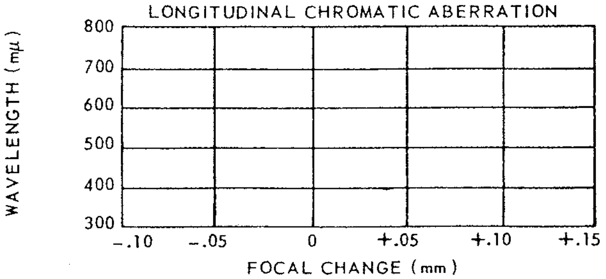
AWAR ______ L/mm

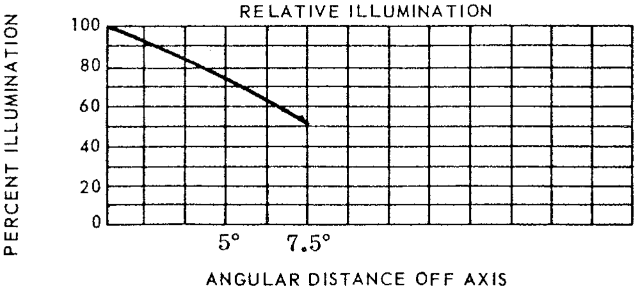
VISUAL ______ TARGET CONTRAST ______ FILTER ______

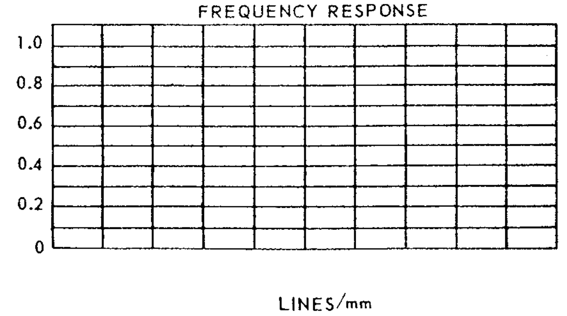
RADIAL																		
TANGENTIAL																		

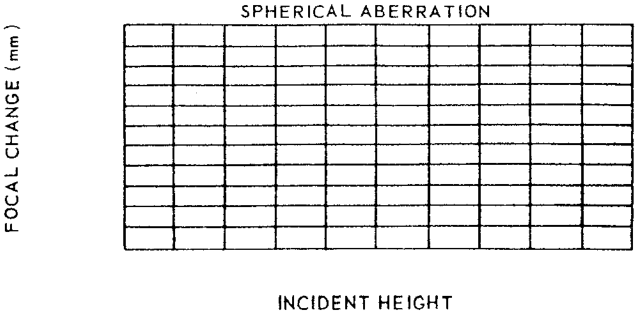

ASTIGMATISM AND CURVATURE OF FIELD


DISTORTION


LONGITUDINAL CHROMATIC ABERRATION


RELATIVE ILLUMINATION


FREQUENCY RESPONSE


SPHERICAL ABERRATION

LENS DATA INFORMATION SHEET

(Reference MIL–STD–150A for definition of terms and methods of measurement)

DATE 15 Sept. 1967			
TYPE (MIL–STD–150A) Type I Aerial Reconnaissance		NAME	
FOCAL LENGTH 12 in.	RELATIVE APERTURE f/4.0	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Leitz, Canada
STOCK NO.	SPECIFICATION NO.	STATUS	

GENERAL DESCRIPTION

CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 12 in. (304.8 mm)	TRANSMITTANCE 87%
BACK FOCAL DISTANCE 5.396 in.	COLOR CORRECTION
FRONT VERTEX BACK FOCAL DISTANCE 11.229 in.	DISTORTION *(Maximum)* 0.5 mm
FLANGE FOCAL DISTANCE 8.118 in.	LENS CELL DIAMETER *(Maximum)* 3.625 in.
SEMI–FIELD ANGLE 7.5°	OVERALL LENGTH 6.093 in.
RELATIVE APERTURE f/4.0	WEIGHT 4 lb 6 oz

REMARKS:

Used on the following aircraft camera: KS–71

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
12 in.	f/4.0	2.25 in. x 2.25 in.	Leitz, Canada

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0		1.25		2.5		3.75		5	6.25								

FILM SO 206 TARGET CONTRAST High FILTER W-12

RADIAL	90		90		80		90		95		99							
TANGENTIAL	90		76		75		75		75		75							

AWAR 83 L/mm

FILM ____ TARGET CONTRAST ____ FILTER ____

RADIAL																		
TANGENTIAL																		

AWAR ____ L/mm

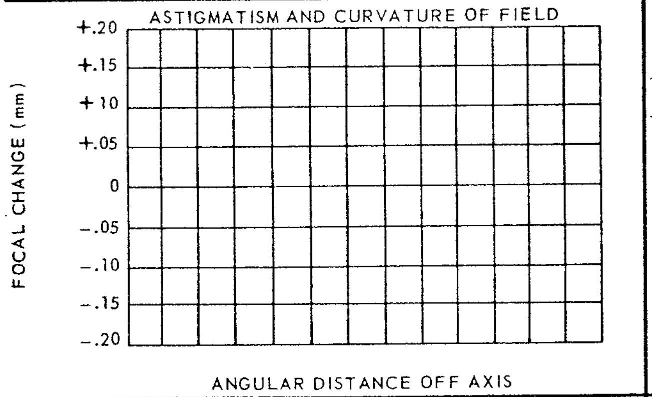
FILM ____ TARGET CONTRAST ____ FILTER ____

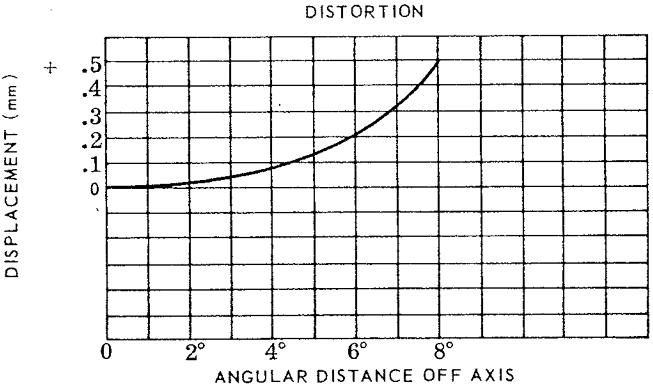
RADIAL																		
TANGENTIAL																		

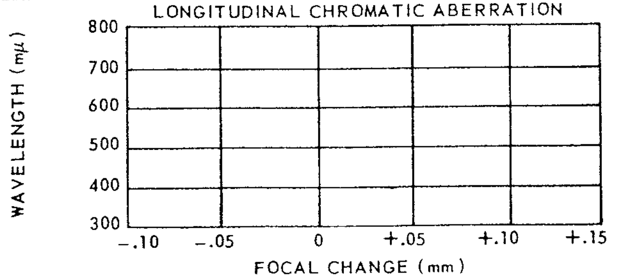
AWAR ____ L/mm

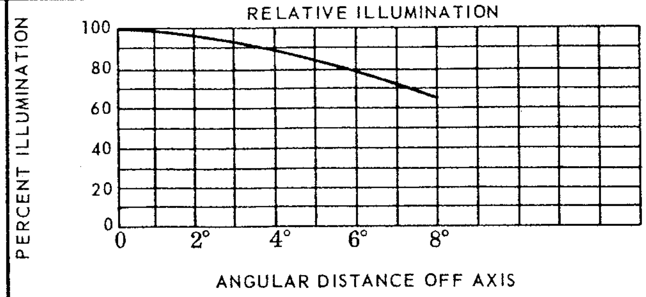
VISUAL ____ TARGET CONTRAST ____ FILTER ____

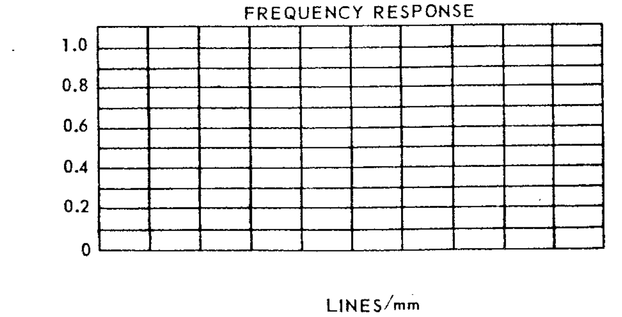
RADIAL																		
TANGENTIAL																		

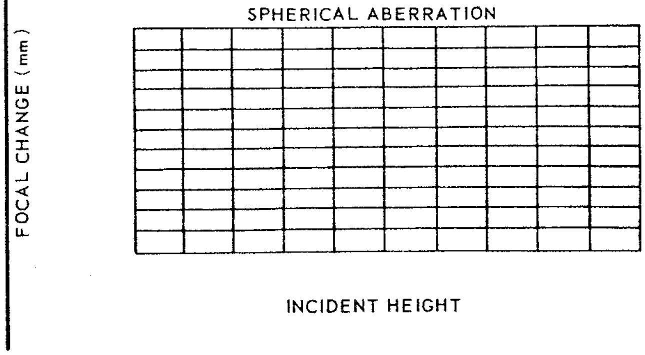












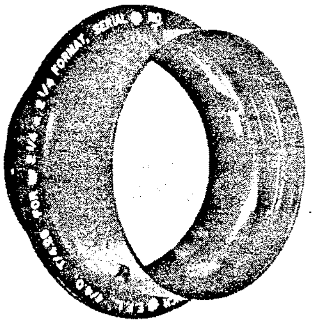
LENS DATA INFORMATION SHEET *(Reference MIL-STD-150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

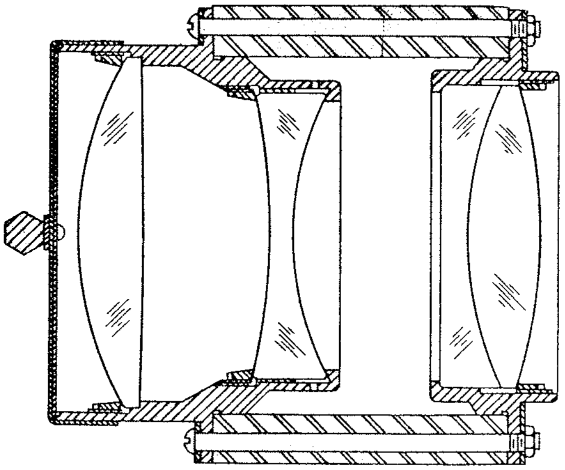
TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME Aspheric Tessar

FOCAL LENGTH 12 in.	RELATIVE APERTURE f/4.0	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Perkin-Elmer Corp.

STOCK NO.	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION





CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 12 in. (304.8 mm)	TRANSMITTANCE 88% (T4.26)
BACK FOCAL DISTANCE 9.356 in.	COLOR CORRECTION
FRONT VERTEX BACK FOCAL DISTANCE	DISTORTION *(Maximum)*
FLANGE FOCAL DISTANCE 9.562 in.	LENS CELL DIAMETER *(Maximum)* 4.296 in.
SEMI-FIELD ANGLE 7.5°	OVERALL LENGTH 5.126 in.
RELATIVE APERTURE f/4.0	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
12 in.	f/4.0	2.25 in. x 2.25 in.	Perkin-Elmer Corp.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0	1.25	2.5	3.75	5

FILM SO 213 TARGET CONTRAST High FILTER W-12

RADIAL	112	100	80	90	71
TANGENTIAL	112	100	80	76	67

AWAR ______ L/mm

FILM SO 243 TARGET CONTRAST High FILTER W-12

RADIAL	200	160	141	113	106
TANGENTIAL	178	150	126	106	95

AWAR ______ L/mm

FILM SO 243 TARGET CONTRAST Medium FILTER W-12

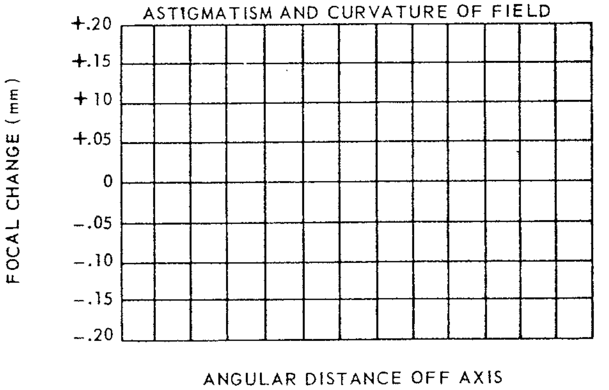
RADIAL	112	100	80	71	75
TANGENTIAL	112	100	79	67	67

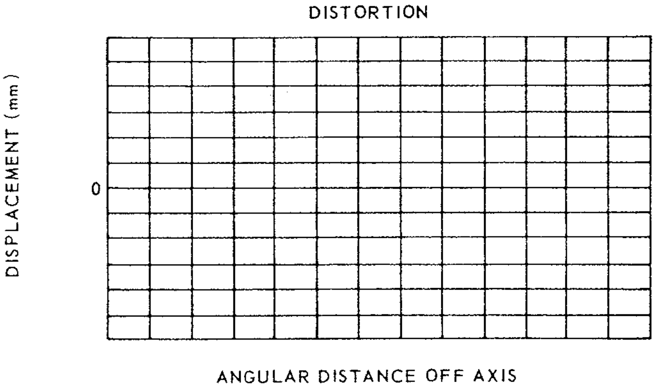
AWAR ______ L/mm

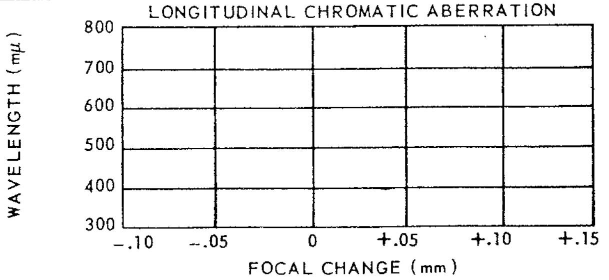
FILM 548-C TARGET CONTRAST High FILTER ______

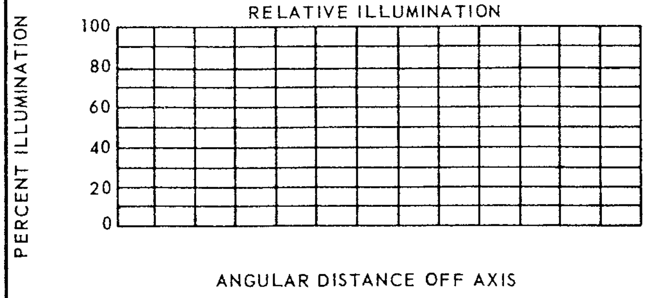
RADIAL	251	251	224	224	212
TANGENTIAL	251	238	200	141	125

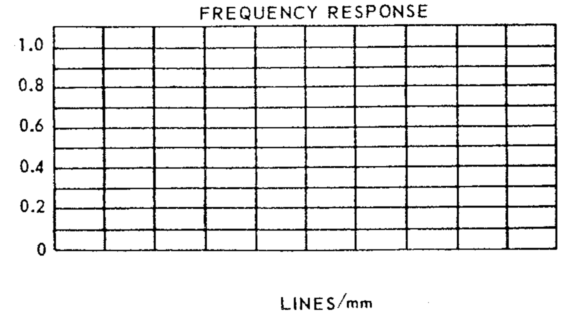
AWAR ______ L/mm

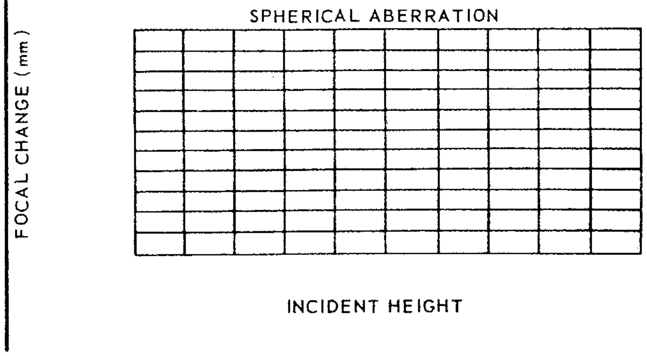












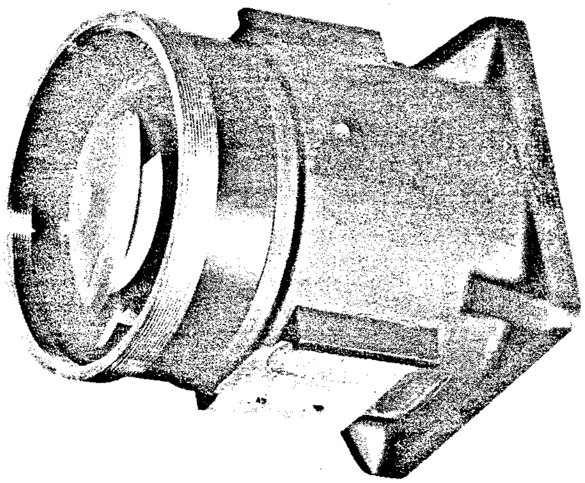
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

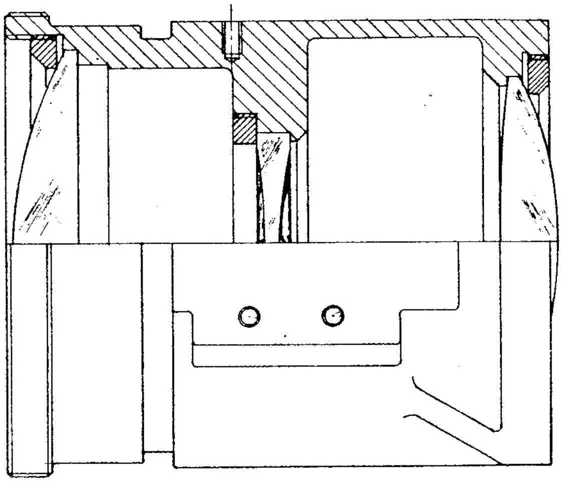
TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME Hyac 1

FOCAL LENGTH 12.0 in.	RELATIVE APERTURE f/5.0	FORMAT 2.25 in. Pan	MANUFACTURER Itek Corp.

STOCK NO.	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION





CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 12 in.	TRANSMITTANCE 92 %
BACK FOCAL DISTANCE 10 in.	COLOR CORRECTION 5100-7200Å
FRONT VERTEX BACK FOCAL DISTANCE 8.38 in.	DISTORTION *(Maximum)* 1 Micron (Theoretical)
FLANGE FOCAL DISTANCE	LENS CELL DIAMETER *(Maximum)* 3.5 in.
SEMI-FIELD ANGLE 6°	OVERALL LENGTH 4.1 in.
RELATIVE APERTURE f/5.0	WEIGHT 31 oz.

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
12.0 in.	f/5.0	2.25 in. Pan	Itek Corp.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0								2.5						5			

FILM SO-243 TARGET CONTRAST 4:1 FILTER W-12

RADIAL	124								168						132			
TANGENTIAL	111								151						112			

AWAR ______ L/mm

FILM SO-206 TARGET CONTRAST 4:1 FILTER W-12

RADIAL	99								99						95			
TANGENTIAL	99								105						95			

AWAR ______ L/mm

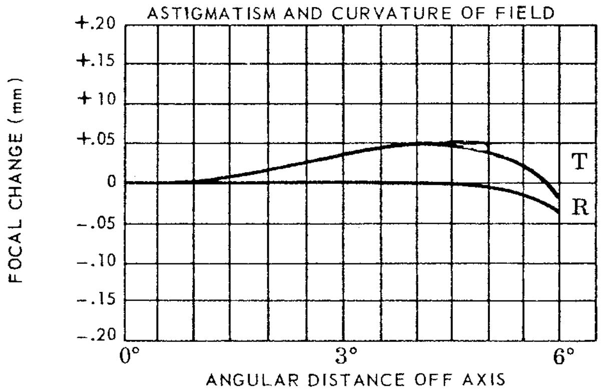
FILM SO-130 TARGET CONTRAST 4:1 FILTER W-12

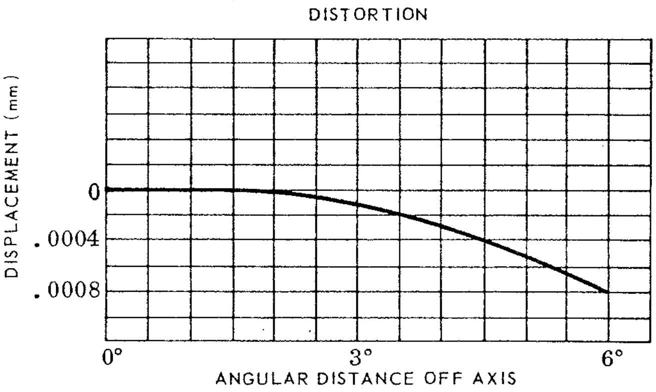
RADIAL	79								88						62			
TANGENTIAL	79								83						62			

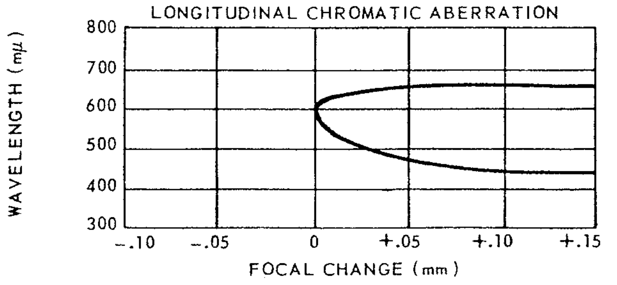
AWAR ______ L/mm

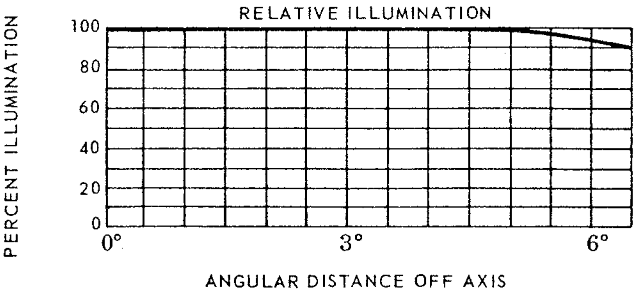
VISUAL ______ TARGET CONTRAST ______ FILTER ______

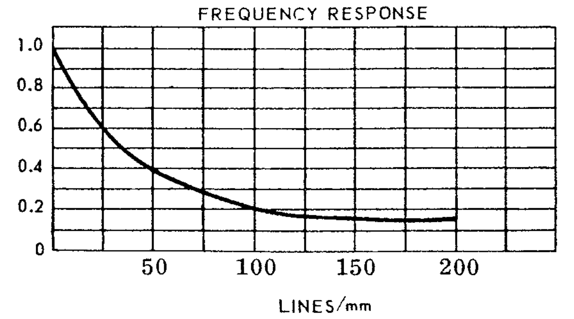
RADIAL																		
TANGENTIAL																		

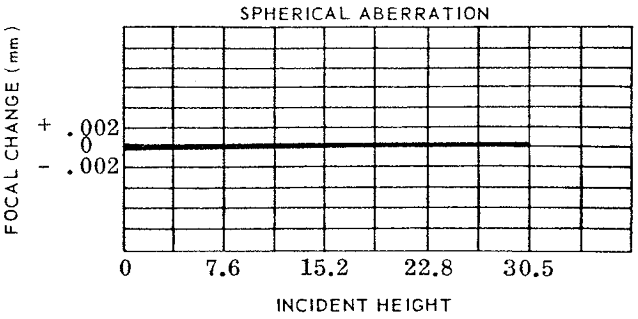

ASTIGMATISM AND CURVATURE OF FIELD


DISTORTION


LONGITUDINAL CHROMATIC ABERRATION


RELATIVE ILLUMINATION


FREQUENCY RESPONSE

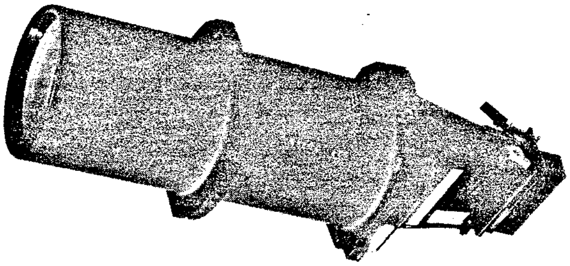

SPHERICAL ABERRATION

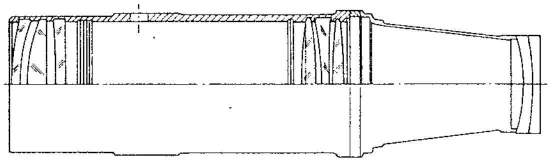
LENS DATA INFORMATION SHEET

(Reference MIL–STD–150A for definition of terms and methods of measurement)

DATE	15 Sept. 1967
TYPE (MIL-STD-150A)	Type I Aerial Reconnaissance
NAME	Field-Flattened Petzval, 8 Elements
FOCAL LENGTH	13 in.
RELATIVE APERTURE	f/3.5
FORMAT	2.75 in. Pan.
MANUFACTURER	Itek Corp.
STOCK NO.	
SPECIFICATION NO.	
STATUS	Available on Order

GENERAL DESCRIPTION





CHARACTERISTICS

EQUIVALENT FOCAL LENGTH	13 in.	TRANSMITTANCE	84%
BACK FOCAL DISTANCE	0.7 in.	COLOR CORRECTION	5400-7000Å
FRONT VERTEX BACK FOCAL DISTANCE	20.147 in.	DISTORTION *(Maximum)*	3 Microns
FLANGE FOCAL DISTANCE		LENS CELL DIAMETER *(Maximum)*	4.6 in.
SEMI-FIELD ANGLE	6.0°	OVERALL LENGTH	17.06 in.
RELATIVE APERTURE	f/3.5	WEIGHT	6 lbs

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
13 in.	f/3.5	2.75 in. Pan.	Itek Corp.

Photographic Resolving Power in Lines /mm

FILM 3404 TARGET CONTRAST 1000:1 FILTER W21

AWAR ______ L/mm

FIELD ANGLE (°)	0					2					4					6		
RADIAL	250					250					250					200		
TANGENTIAL	250					250					250					200		

FILM 3404 TARGET CONTRAST 2:1 FILTER W21

AWAR ______ L/mm

RADIAL	160					160					150					130		
TANGENTIAL	160					160					150					130		

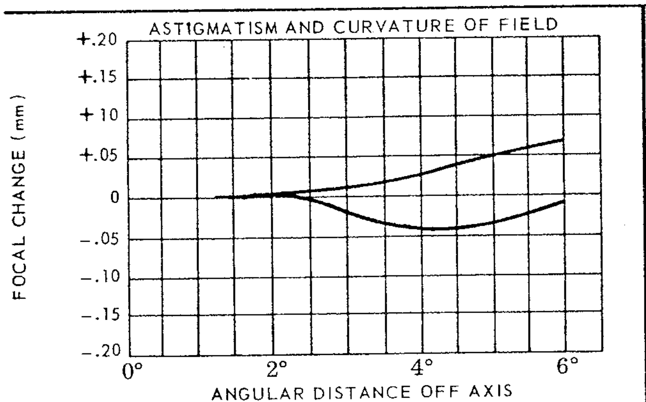
FILM ______ TARGET CONTRAST ______ FILTER ______

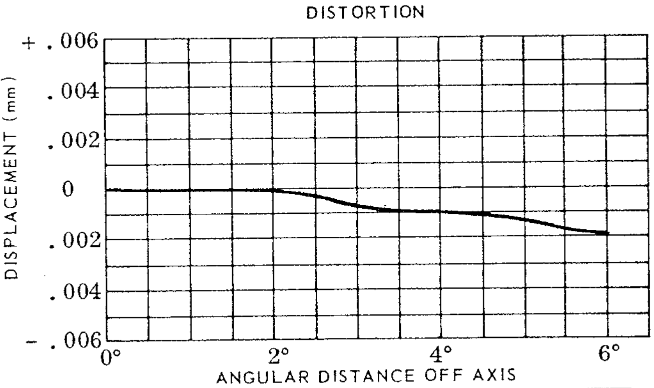
AWAR ______ L/mm

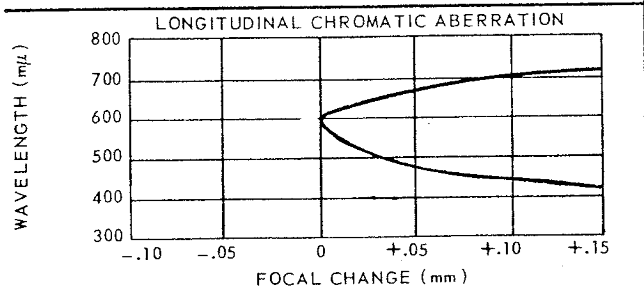
RADIAL																		
TANGENTIAL																		

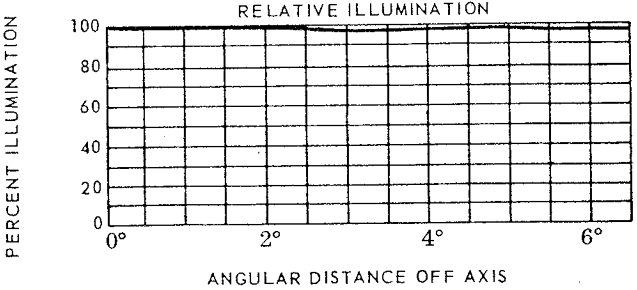
VISUAL ______ TARGET CONTRAST ______ FILTER ______

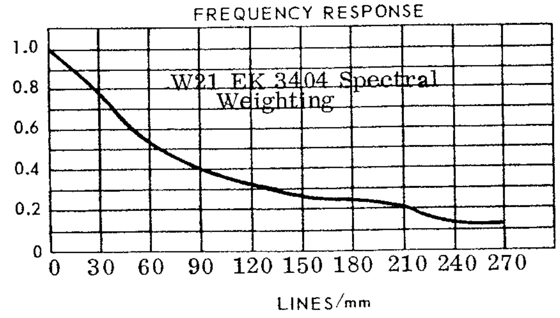
RADIAL																		
TANGENTIAL																		

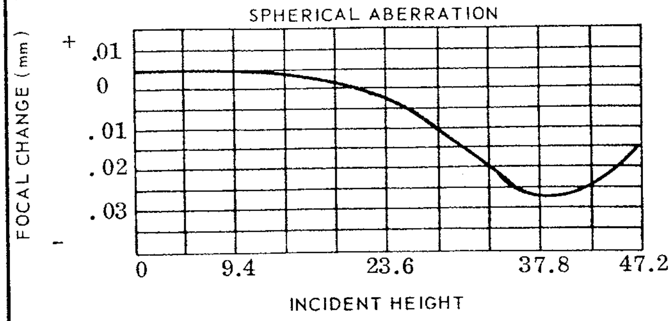

ASTIGMATISM AND CURVATURE OF FIELD


DISTORTION


LONGITUDINAL CHROMATIC ABERRATION


RELATIVE ILLUMINATION


FREQUENCY RESPONSE


SPHERICAL ABERRATION

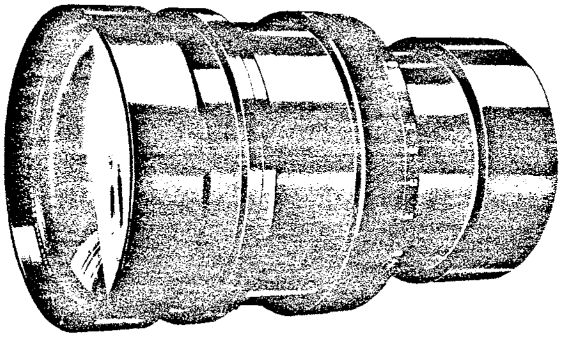
LENS DATA INFORMATION SHEET *(Reference MIL-STD-150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

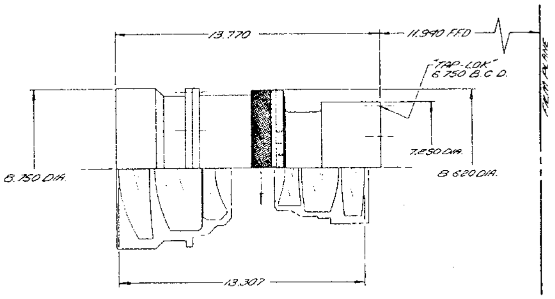
TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME Paxar

FOCAL LENGTH 18 in.	RELATIVE APERTURE f/3.0	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Pacific Optical Corp.

STOCK NO. Pacific Optical P/N 32375	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION





CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 18 in. (457 mm)	TRANSMITTANCE 98% at 5°
BACK FOCAL DISTANCE 12.30 in. (312.4 mm)	COLOR CORRECTION 5461-6563 Å
FRONT VERTEX BACK FOCAL DISTANCE 25.6 in. (650.2 mm)	DISTORTION *(Maximum)* 0.1% at 5°
FLANGE FOCAL DISTANCE 11.94 in. (303.3 mm)	LENS CELL DIAMETER *(Maximum)* 8.75 in.
SEMI-FIELD ANGLE 5°	OVERALL LENGTH 13.77 in.
RELATIVE APERTURE f/3.0	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
18 in.	f/3.0	2.25 in. x 2.25 in.	Pacific Optical Corp.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)																		

FILM Pan X TARGET CONTRAST ______ FILTER ______

RADIAL																		
TANGENTIAL																		

AWAR 65 L/mm

FILM SO 243 TARGET CONTRAST ______ FILTER ______

RADIAL																		
TANGENTIAL																		

AWAR 85 L/mm

FILM ______ TARGET CONTRAST ______ FILTER ______

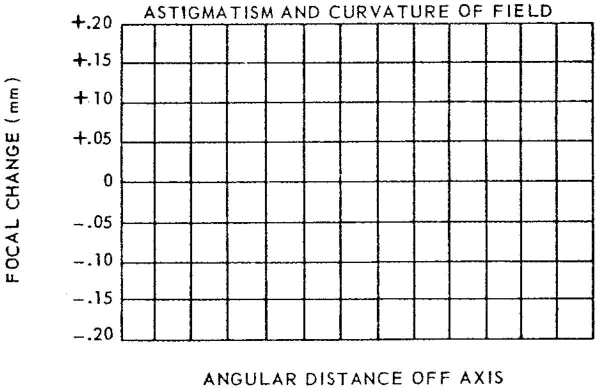
RADIAL																		
TANGENTIAL																		

AWAR ______ L/mm

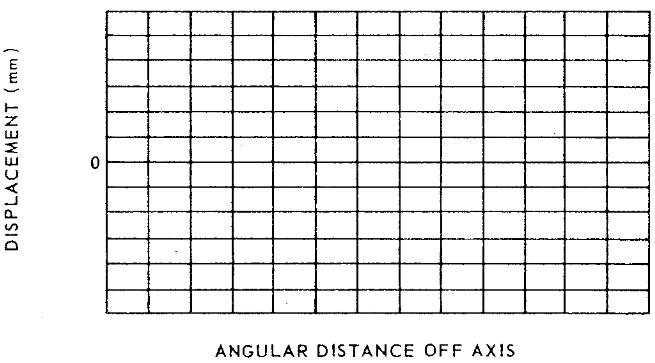
VISUAL ______ TARGET CONTRAST ______ FILTER ______

RADIAL																		
TANGENTIAL																		

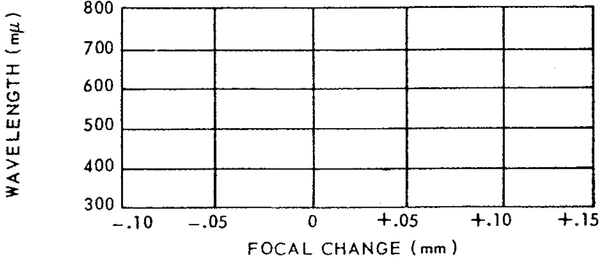
ASTIGMATISM AND CURVATURE OF FIELD



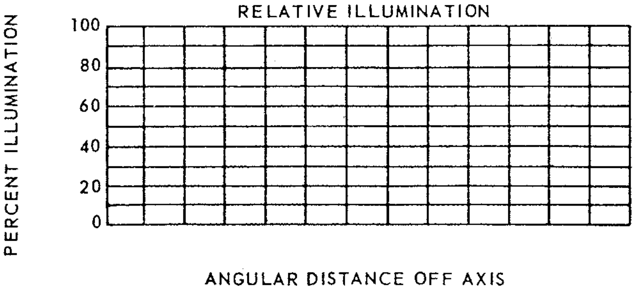
DISTORTION



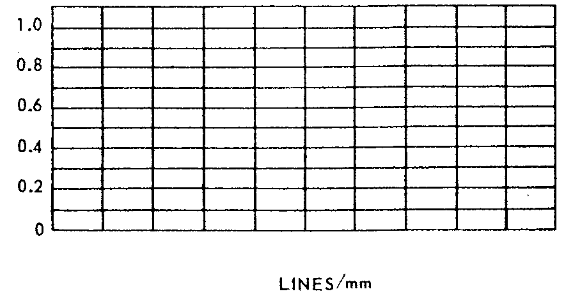
LONGITUDINAL CHROMATIC ABERRATION



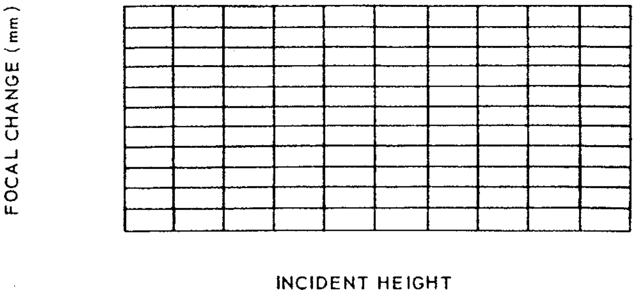
RELATIVE ILLUMINATION



FREQUENCY RESPONSE



SPHERICAL ABERRATION



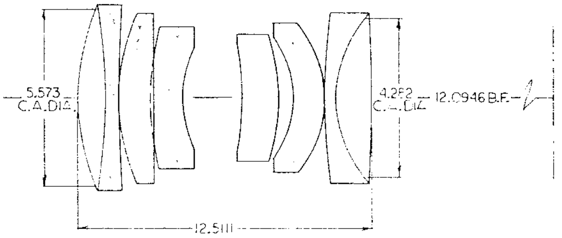
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME

FOCAL LENGTH 18 in.	RELATIVE APERTURE f/4.0	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Fairchild Space & Defense Systems, El Segundo

STOCK NO. Fairchild P/N 13014-MA	SPECIFICATION NO.	STATUS Production

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 18 in. (457.2 mm)	TRANSMITTANCE 75%
BACK FOCAL DISTANCE 12.0946 in.	COLOR CORRECTION
FRONT VERTEX BACK FOCAL DISTANCE 24.6057 in.	DISTORTION *(Maximum)*
FLANGE FOCAL DISTANCE	LENS CELL DIAMETER *(Maximum)*
SEMI–FIELD ANGLE 5.04°	OVERALL LENGTH
RELATIVE APERTURE f/4.0	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
18 in.	f/4.0	2.25 in. x 2.25 in.	Fairchild Space & Defense Systems, El Segundo

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0		2.52		3.53		5.04											

FILM Plus X Aerecon TARGET CONTRAST ______ FILTER ______ AWAR ______ L/mm

RADIAL	80		80		80		80											
TANGENTIAL	80		70		70		70											

FILM Panatomic X TARGET CONTRAST ______ FILTER ______ AWAR ______ L/mm

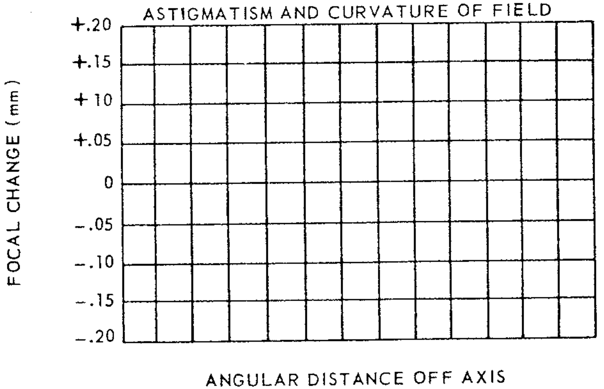
RADIAL	150		170		150		150											
TANGENTIAL	140		130		130		130											

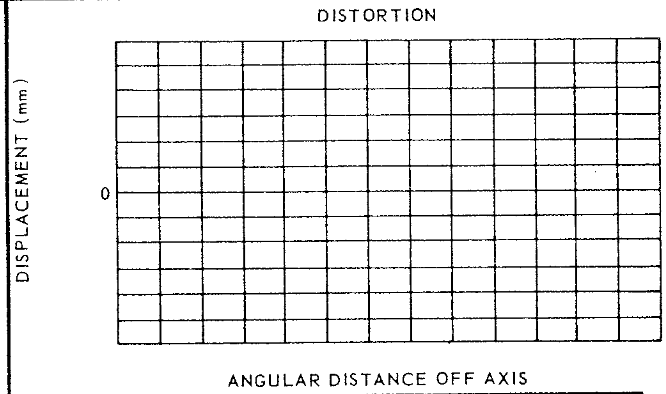
FILM ______ TARGET CONTRAST ______ FILTER ______ AWAR ______ L/mm

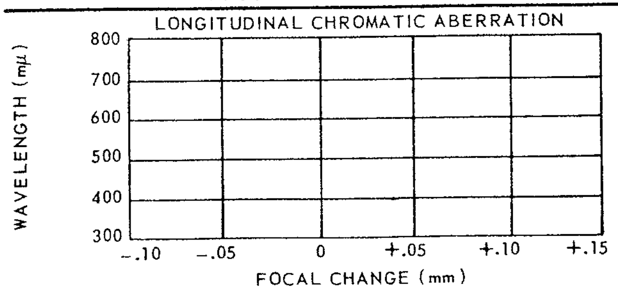
RADIAL																		
TANGENTIAL																		

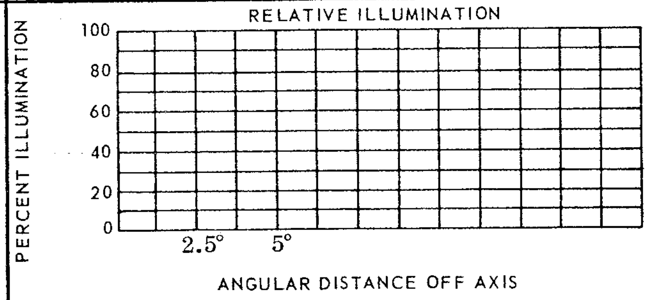
VISUAL ______ TARGET CONTRAST ______ FILTER ______

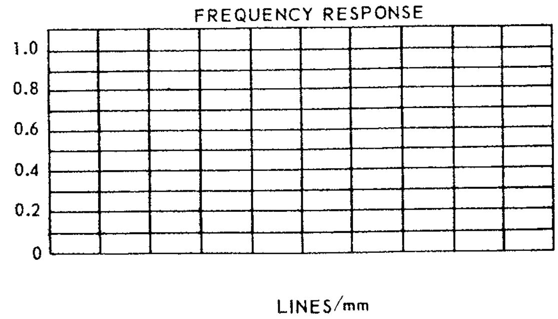
RADIAL																		
TANGENTIAL																		

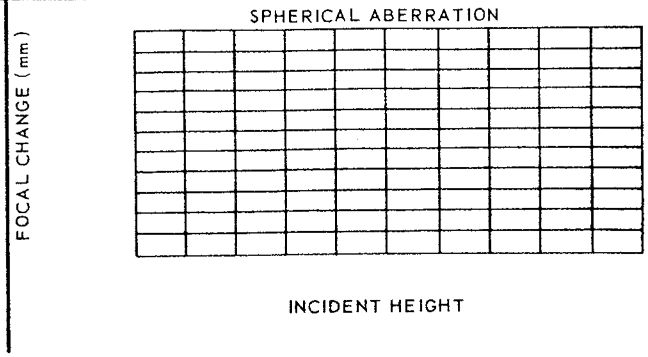












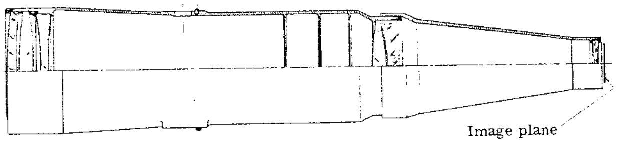
LENS DATA INFORMATION SHEET *(Reference MIL-STD-150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME Field Flattened Petzval, 6 Elements

FOCAL LENGTH 24 in.	RELATIVE APERTURE f/3.5	FORMAT 2.25 in. Pan.	MANUFACTURER Itek Corp.

STOCK NO.	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION



34.87-inch overall length

CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 24.0 in. (609.6 mm)	TRANSMITTANCE 84%
BACK FOCAL DISTANCE 0.157 in.	COLOR CORRECTION 5400-7000Å
FRONT VERTEX BACK FOCAL DISTANCE 36.748 in.	DISTORTION *(Maximum)* 6 Microns
FLANGE FOCAL DISTANCE	LENS CELL DIAMETER *(Maximum)* 7.34 in.
SEMI-FIELD ANGLE 3.0°	OVERALL LENGTH 34.87 in.
RELATIVE APERTURE f/3.5	WEIGHT 19 lbs

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
24 in.	f/3.5	2.25 in. Pan.	Itek Corp.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0					1						2						3

FILM 3404 TARGET CONTRAST 1000:1 FILTER W21

RADIAL	250					250						245						230
TANGENTIAL	250					250						245						230

AWAR ________ L/mm

FILM 3404 TARGET CONTRAST 2:1 FILTER W21

RADIAL	140					140						140						130
TANGENTIAL	140					140						140						130

AWAR ________ L/mm

FILM ________ TARGET CONTRAST ________ FILTER ________

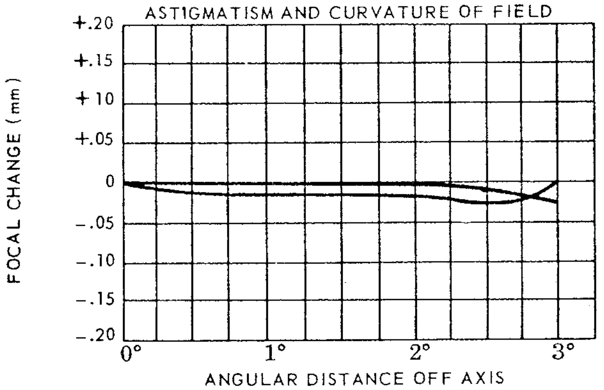
RADIAL																		
TANGENTIAL																		

AWAR ________ L/mm

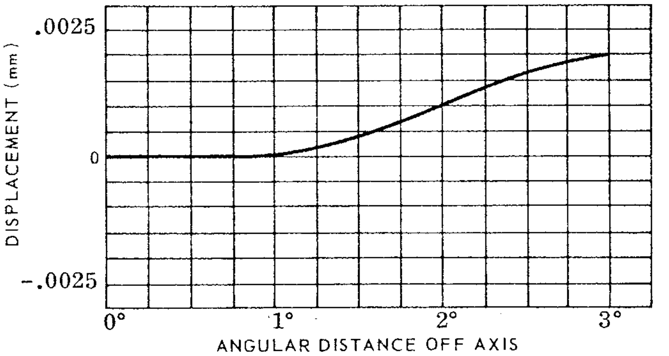
VISUAL ________ TARGET CONTRAST ________ FILTER ________

RADIAL																		
TANGENTIAL																		

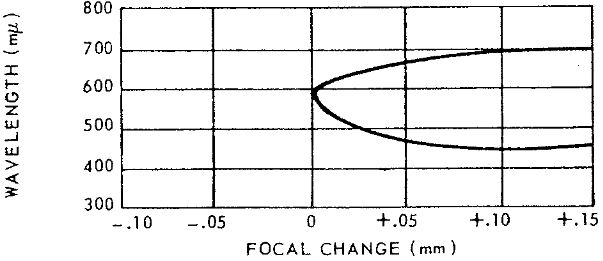
ASTIGMATISM AND CURVATURE OF FIELD



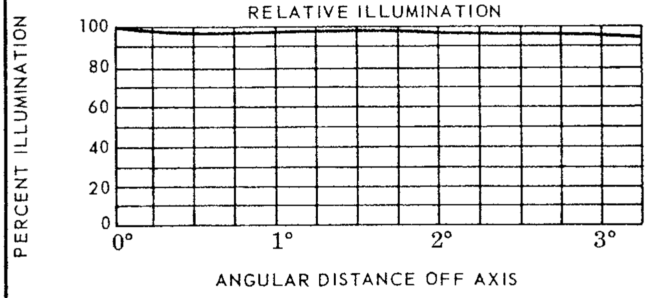
DISTORTION



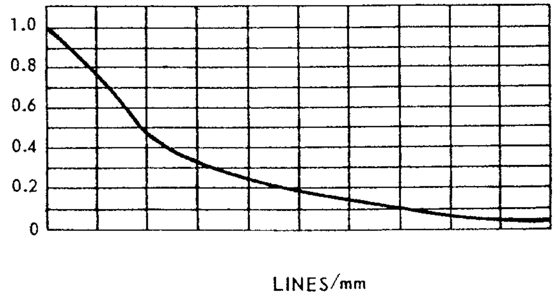
LONGITUDINAL CHROMATIC ABERRATION



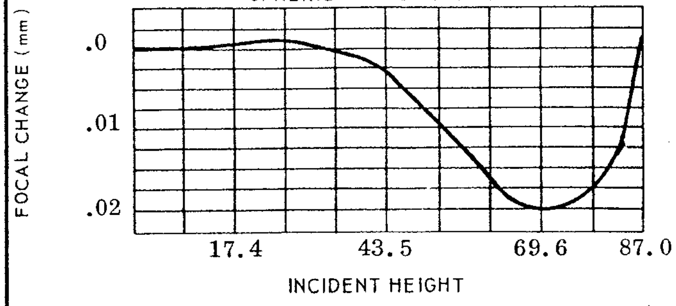
RELATIVE ILLUMINATION



FREQUENCY RESPONSE



SPHERICAL ABERRATION



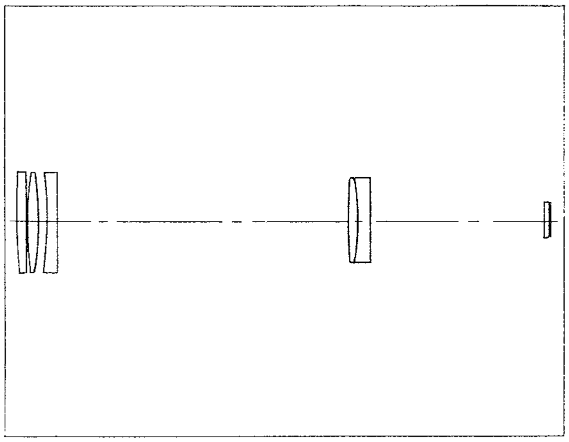
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME Folded Petzval

FOCAL LENGTH 24 in.	RELATIVE APERTURE f/3.5	FORMAT 2.25 in. Pan	MANUFACTURER Itek Corp.

STOCK NO.	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 24 in. (609.6 mm)	TRANSMITTANCE 84%
BACK FOCAL DISTANCE 0.157 in.	COLOR CORRECTION 5400-7000Å
FRONT VERTEX BACK FOCAL DISTANCE 36.748 in.	DISTORTION *(Maximum)* 6 Microns
FLANGE FOCAL DISTANCE	LENS CELL DIAMETER *(Maximum)* 7.34 in.
SEMI-FIELD ANGLE 3.0°	OVERALL LENGTH
RELATIVE APERTURE f/3.5	WEIGHT

REMARKS:

Used on the following aircraft cameras: KA-67A

FOCAL LENGTH 24 in.	RELATIVE APERTURE f/3.5	FORMAT 2.25 in. Pan	MANUFACTURER Itek Corp.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0					1						2						3

FILM 3404 TARGET CONTRAST 1000:1 FILTER W21

RADIAL	250					250						245						230
TANGENTIAL	250					250						245						230

AWAR ______ L/mm

FILM 3404 TARGET CONTRAST 2:1 FILTER ______

RADIAL	140					140						140						130
TANGENTIAL	140					140						140						130

AWAR ______ L/mm

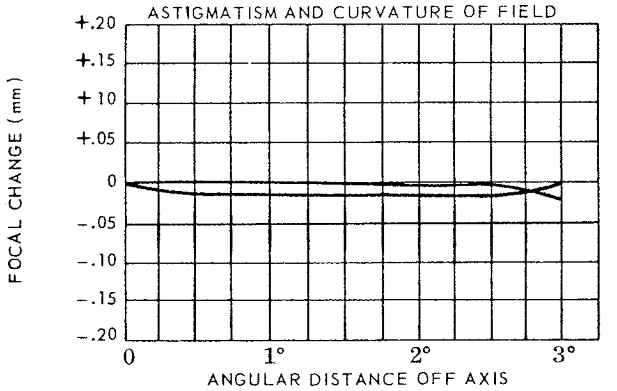
FILM ______ TARGET CONTRAST ______ FILTER ______

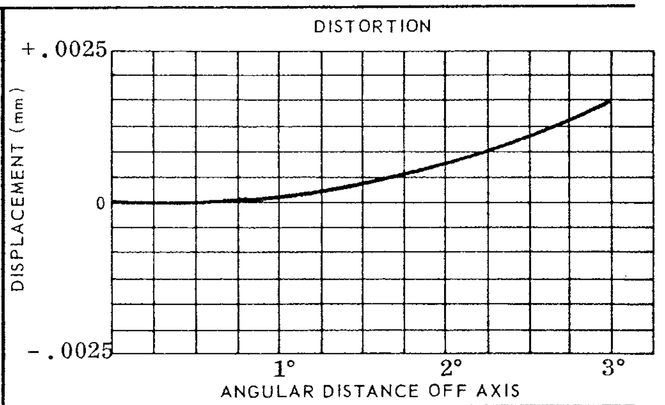
RADIAL																		
TANGENTIAL																		

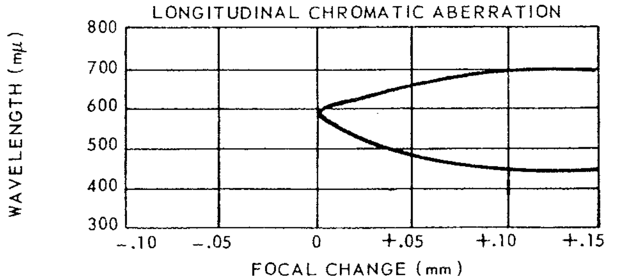
AWAR ______ L/mm

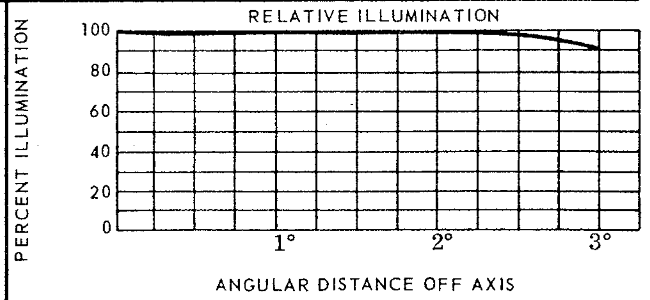
VISUAL ______ TARGET CONTRAST ______ FILTER ______

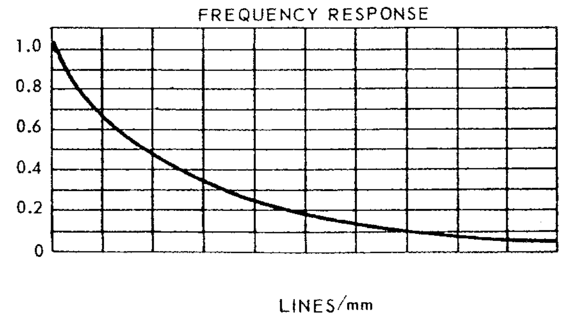
RADIAL																		
TANGENTIAL																		

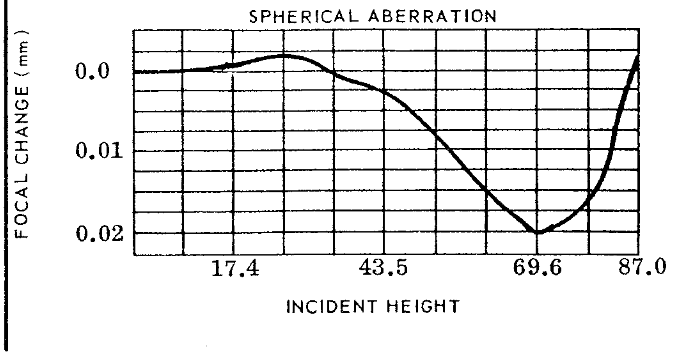

ASTIGMATISM AND CURVATURE OF FIELD


DISTORTION


LONGITUDINAL CHROMATIC ABERRATION


RELATIVE ILLUMINATION


FREQUENCY RESPONSE


SPHERICAL ABERRATION

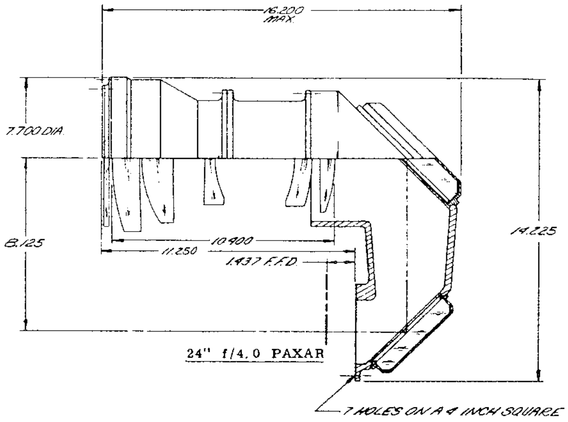
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL–STD–150A) Type I Aerial Reconnaissance	NAME Paxar

FOCAL LENGTH 24 in.	RELATIVE APERTURE f/4.0	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Pacific Optical Corp.

STOCK NO. Pacific Optical P.N 33050	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 24 in. (610 mm)	TRANSMITTANCE
BACK FOCAL DISTANCE 14.89 in.	COLOR CORRECTION 5461-6563 Å
FRONT VERTEX BACK FOCAL DISTANCE 25.29 in.	DISTORTION *(Maximum)*
FLANGE FOCAL DISTANCE 1.437 in.	LENS CELL DIAMETER *(Maximum)* 7.7 in.
SEMI–FIELD ANGLE 3° 45'	OVERALL LENGTH 16.2 in.
RELATIVE APERTURE f/4.0	WEIGHT 30 lbs.

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
24 in.	f/4.0	2.25 in. x 2.25 in.	Pacific Optical Corp.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)																	

FILM Plus X TARGET CONTRAST High FILTER W-12

RADIAL																	
TANGENTIAL																	

AWAR 41 L/mm

FILM ______ TARGET CONTRAST ______ FILTER ______

RADIAL																	
TANGENTIAL																	

AWAR ______ L/mm

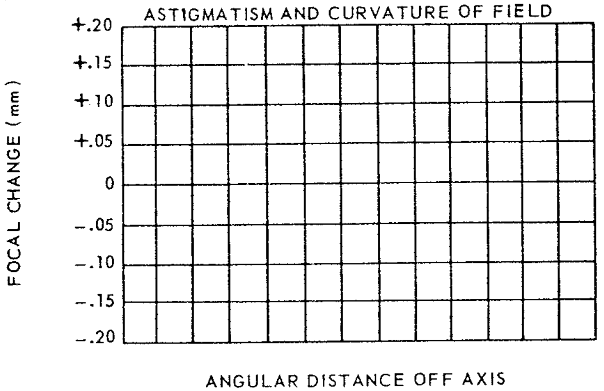
FILM ______ TARGET CONTRAST ______ FILTER ______

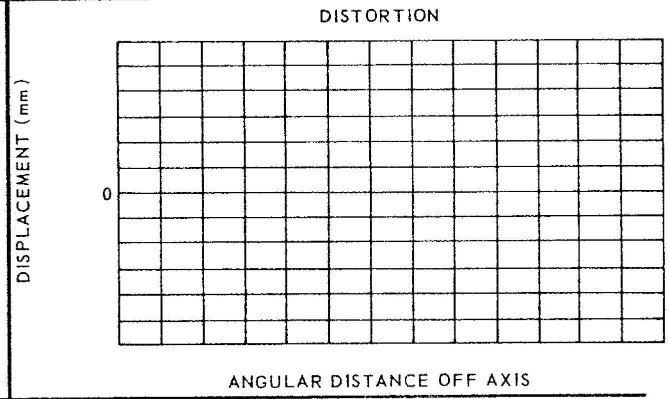
RADIAL																	
TANGENTIAL																	

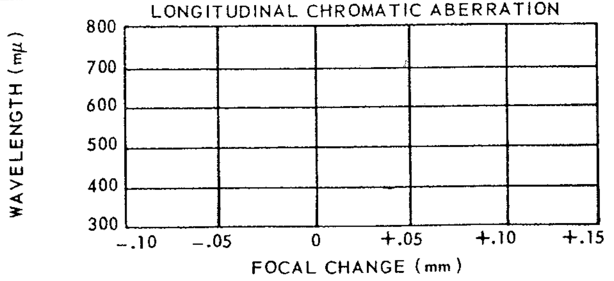
AWAR ______ L/mm

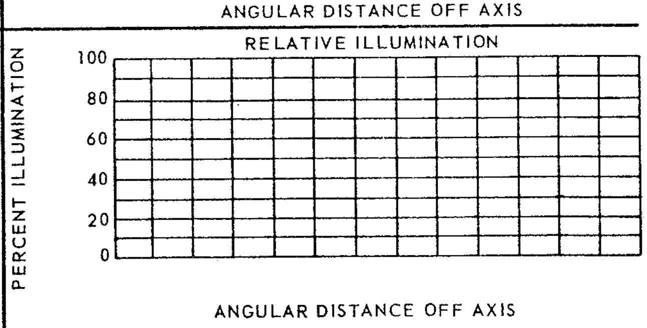
VISUAL ______ TARGET CONTRAST ______ FILTER ______

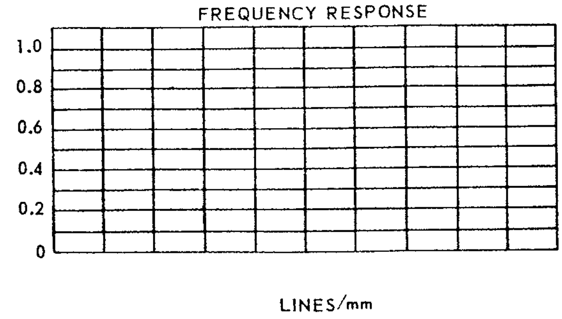
RADIAL																	
TANGENTIAL																	

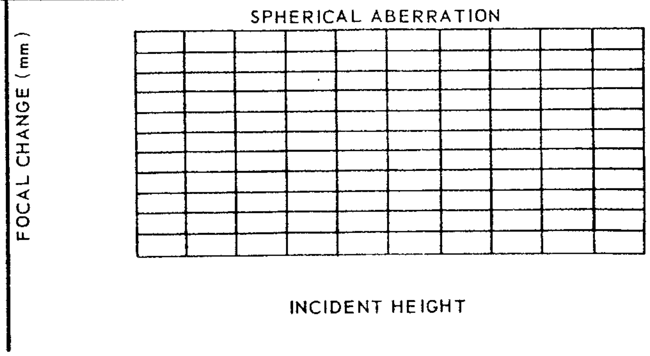












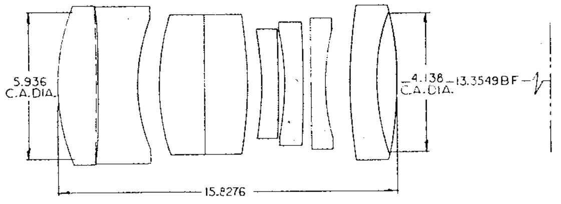
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME

FOCAL LENGTH 24 in.	RELATIVE APERTURE f/5.0	FORMAT 2.25 in. x 2.25 in.	MANUFACTURER Fairchild Space & Defense Systems, El Segundo

STOCK NO. Fairchild P/N 13015-MA	SPECIFICATION NO.	STATUS Production

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 24 in. (609.6 mm)	TRANSMITTANCE 78%
BACK FOCAL DISTANCE 13.3549 in.	COLOR CORRECTION Wratten 12
FRONT VERTEX BACK FOCAL DISTANCE 29.1825 in.	DISTORTION *(Maximum)*
FLANGE FOCAL DISTANCE	LENS CELL DIAMETER *(Maximum)*
SEMI-FIELD ANGLE 3.79°	OVERALL LENGTH
RELATIVE APERTURE f/5.0	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
24 in.	f/5.0	2.25 in. x 2.25 in.	Fairchild Space & Defense Systems, El Segundo

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0		1.9		2.65		3.79											

FILM Plus X Aerecon TARGET CONTRAST ______ FILTER ______

RADIAL	70		60		60		60											
TANGENTIAL	70		60		60		60											

AWAR ______ L/mm

FILM Panatomic X TARGET CONTRAST ______ FILTER ______

RADIAL	160		160		160		160											
TANGENTIAL	140		140		140		140											

AWAR ______ L/mm

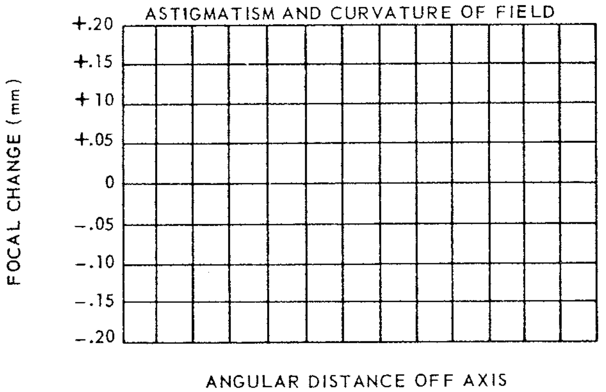
FILM ______ TARGET CONTRAST ______ FILTER ______

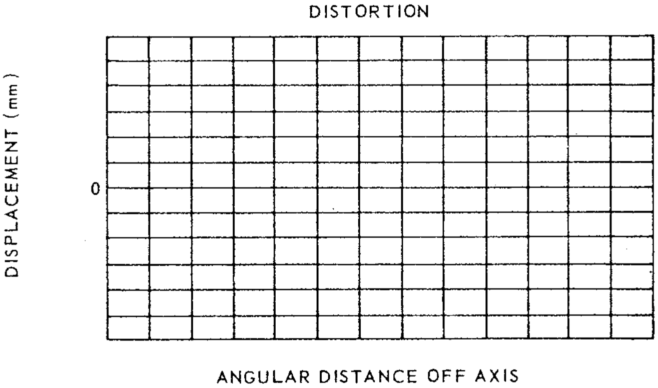
RADIAL																		
TANGENTIAL																		

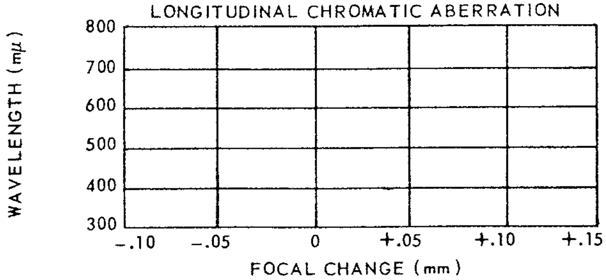
AWAR ______ L/mm

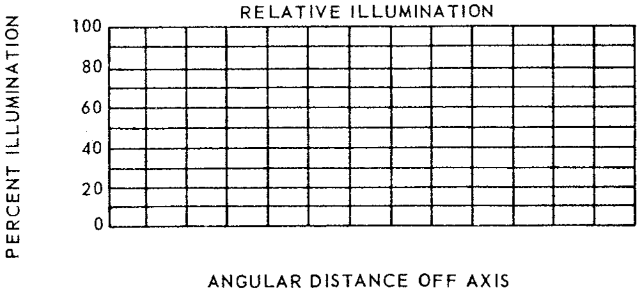
VISUAL ______ TARGET CONTRAST ______ FILTER ______

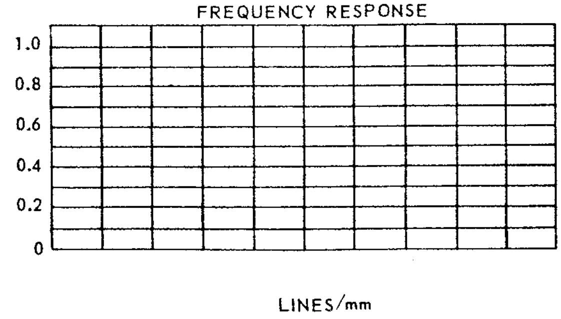
RADIAL																		
TANGENTIAL																		

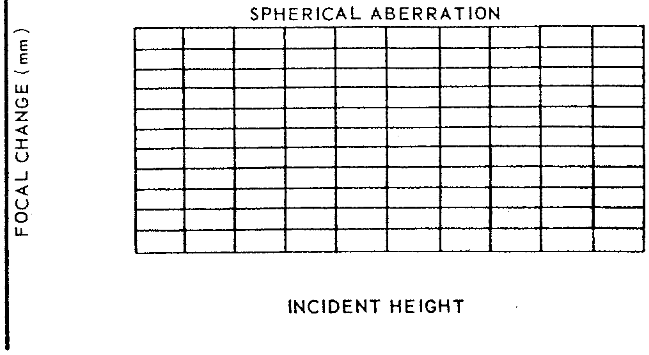










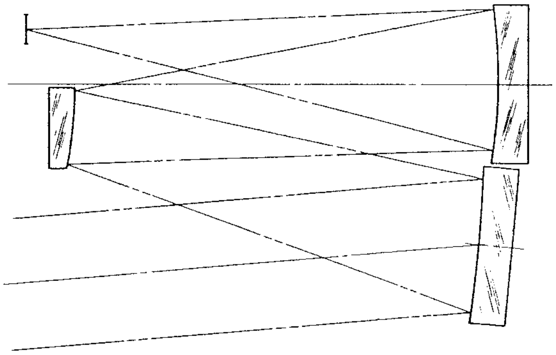


LENS DATA INFORMATION SHEET

(Reference MIL–STD–150A for definition of terms and methods of measurement)

DATE 15 Sept. 1967			
TYPE (MIL–STD–150A) Type I Aerial Reconnaissance	NAME Three-Mirror Objective		
FOCAL LENGTH 24 in.	RELATIVE APERTURE f/3.0	FORMAT 2.30 in. Diameter	MANUFACTURER American Optical Co.
STOCK NO.	SPECIFICATION NO.	STATUS	

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 24.0 in. (609.6 mm)	TRANSMITTANCE 70%
BACK FOCAL DISTANCE 38.242 in.	COLOR CORRECTION Entire Spectrum
FRONT VERTEX BACK FOCAL DISTANCE 101.6 in.	DISTORTION *(Maximum)* 4%
FLANGE FOCAL DISTANCE	LENS CELL DIAMETER *(Maximum)*
SEMI-FIELD ANGLE 3.0°	OVERALL LENGTH
RELATIVE APERTURE f/3.0	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
24 in.	f/3.0	2.30 in. Diameter	American Optical Co.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)																		

FILM ______ TARGET CONTRAST ______ FILTER ______

RADIAL																		
TANGENTIAL																		

AWAR ______ L/mm

FILM ______ TARGET CONTRAST ______ FILTER ______

RADIAL																		
TANGENTIAL																		

AWAR ______ L/mm

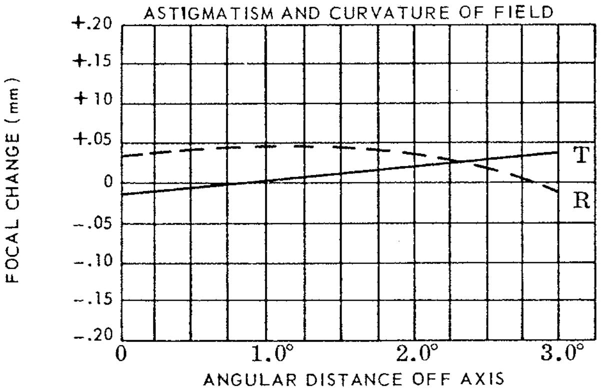
FILM ______ TARGET CONTRAST ______ FILTER ______

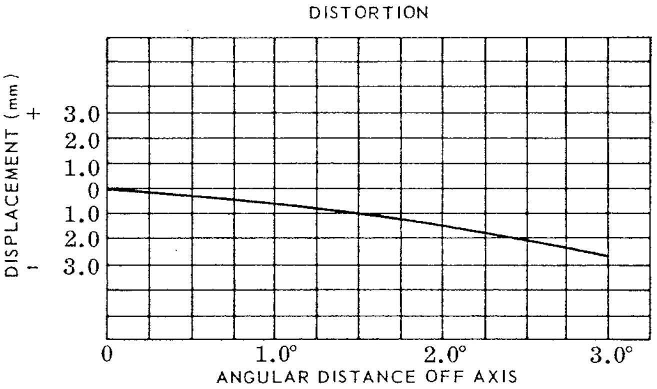
RADIAL																		
TANGENTIAL																		

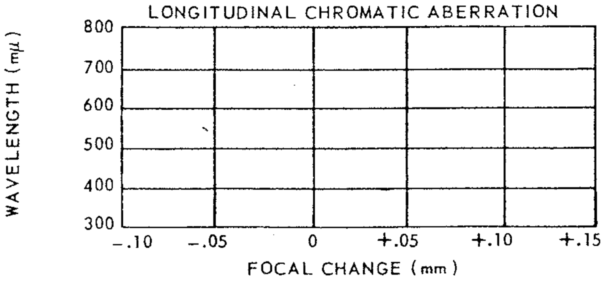
AWAR ______ L/mm

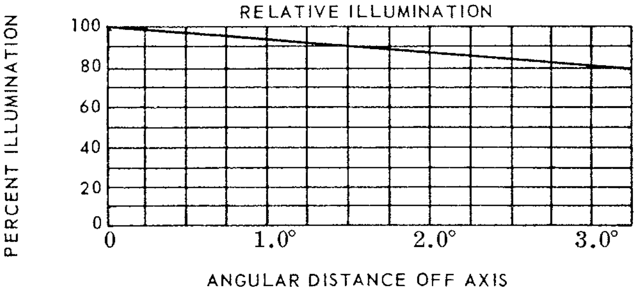
VISUAL ______ TARGET CONTRAST ______ FILTER ______

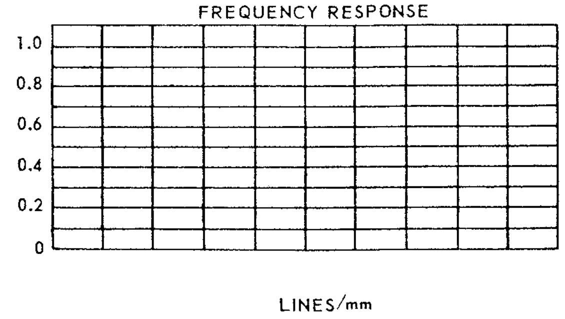
RADIAL																		
TANGENTIAL																		

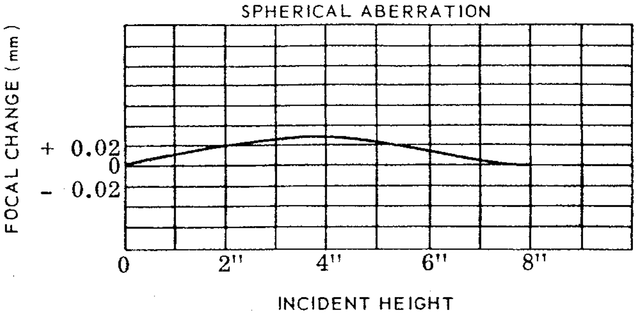












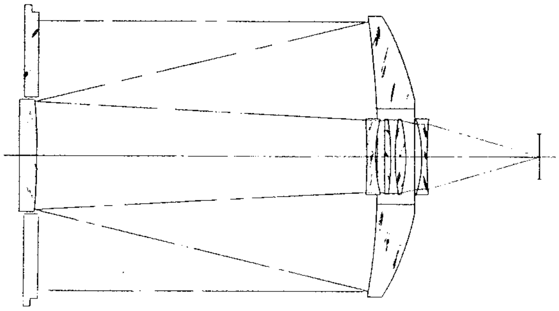
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL–STD–150A) Type I Aerial Reconnaissance	NAME Catadioptric

FOCAL LENGTH 50 in.	RELATIVE APERTURE f/4.25	FORMAT 2.2 in. Diameter	MANUFACTURER American Optical Co.

STOCK NO.	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 51.0 in. (1295.4 mm)	TRANSMITTANCE 50%
BACK FOCAL DISTANCE 4.848 in.	COLOR CORRECTION 4861-6563Å
FRONT VERTEX BACK FOCAL DISTANCE 37.04 in.	DISTORTION *(Maximum)* 0.89%
FLANGE FOCAL DISTANCE 4.50 in.	LENS CELL DIAMETER *(Maximum)* 16.25 in.
SEMI–FIELD ANGLE 1.25°	OVERALL LENGTH 19.25 in.
RELATIVE APERTURE f/4.25	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
50 in.	f/4.25	2.2 in. Diameter	American Optical Co.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0		.5		.9		1.3											

FILM ______ TARGET CONTRAST High FILTER ______

RADIAL	376		356		280		212											
TANGENTIAL	376		356		280		212											

AWAR 262 L/mm

FILM ______ TARGET CONTRAST ______ FILTER ______

RADIAL																		
TANGENTIAL																		

AWAR ______ L/mm

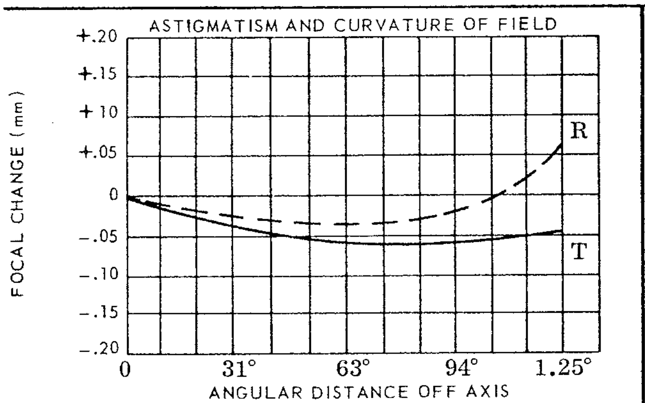
FILM ______ TARGET CONTRAST ______ FILTER ______

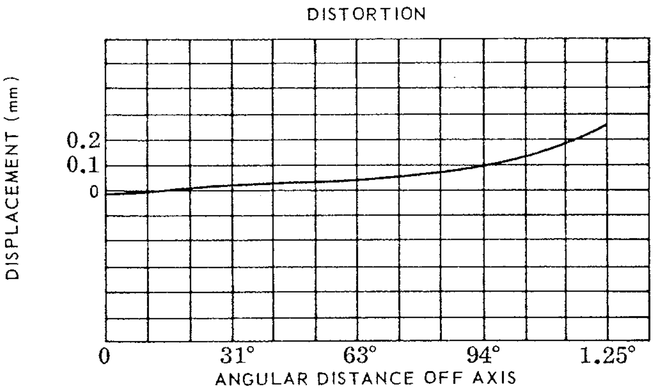
RADIAL																		
TANGENTIAL																		

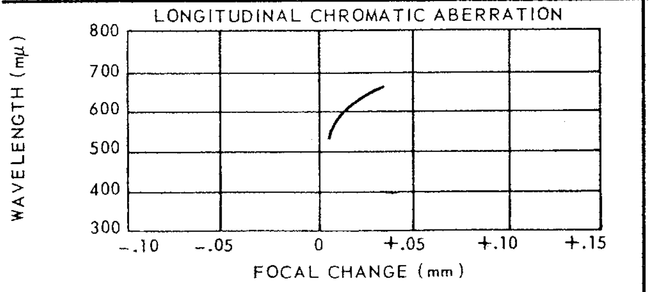
AWAR ______ L/mm

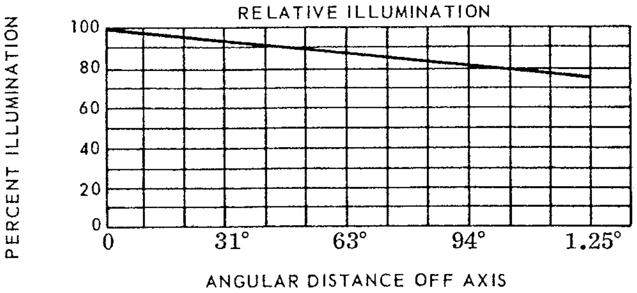
VISUAL ______ TARGET CONTRAST ______ FILTER ______

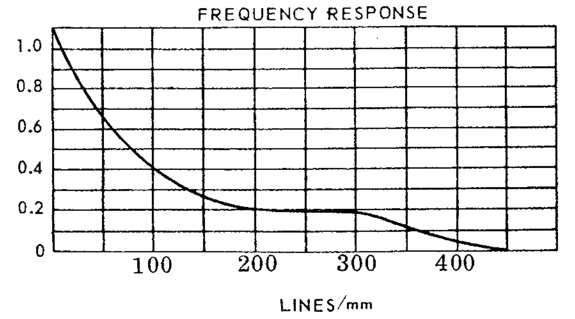
RADIAL																		
TANGENTIAL																		

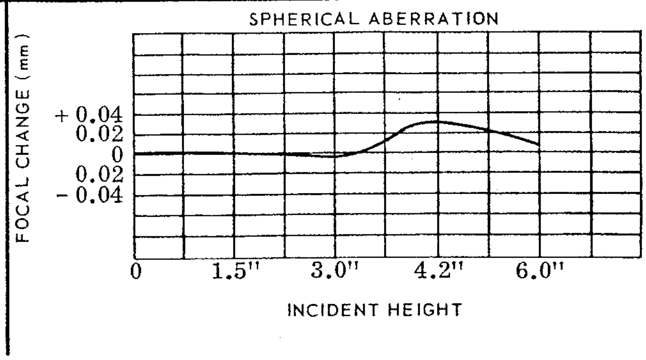

ASTIGMATISM AND CURVATURE OF FIELD


DISTORTION


LONGITUDINAL CHROMATIC ABERRATION


RELATIVE ILLUMINATION


FREQUENCY RESPONSE


SPHERICAL ABERRATION

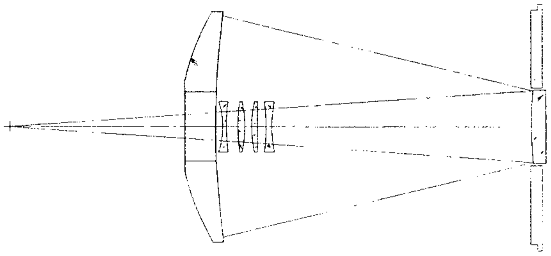
LENS DATA INFORMATION SHEET *(Reference MIL–STD–150A for definition of terms and methods of measurement)*	DATE 15 Sept. 1967

TYPE (MIL-STD-150A) Type I Aerial Reconnaissance	NAME Catadioptric

FOCAL LENGTH 100 in.	RELATIVE APERTURE f/8.6	FORMAT 2.2 in. Diameter	MANUFACTURER American Optical Co.

STOCK NO.	SPECIFICATION NO.	STATUS

GENERAL DESCRIPTION



CHARACTERISTICS

EQUIVALENT FOCAL LENGTH 103.3 in.	TRANSMITTANCE 55%
BACK FOCAL DISTANCE 11.309 in.	COLOR CORRECTION 4861-6563Å
FRONT VERTEX BACK FOCAL DISTANCE 44.6 in.	DISTORTION *(Maximum)* 0.56%
FLANGE FOCAL DISTANCE 7.83 in.	LENS CELL DIAMETER *(Maximum)* 16.25 in.
SEMI-FIELD ANGLE 0.63°	OVERALL LENGTH 21.2 in.
RELATIVE APERTURE f/8.6	WEIGHT

REMARKS:

FOCAL LENGTH	RELATIVE APERTURE	FORMAT	MANUFACTURER
100 in.	f/8.6	2.2 in. Diameter	American Optical Co.

Photographic Resolving Power in Lines /mm

FIELD ANGLE (°)	0		.21		.43		.64											

FILM ______ TARGET CONTRAST High FILTER ______

RADIAL	188		178		168		158											
TANGENTIAL	188		178		168		158											

AWAR 164 L/mm

FILM ______ TARGET CONTRAST ______ FILTER ______

RADIAL																		
TANGENTIAL																		

AWAR ______ L/mm

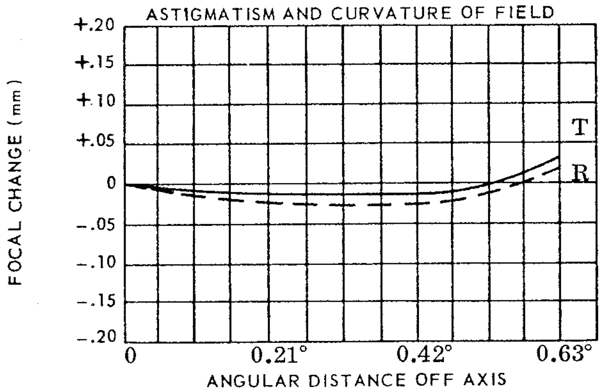
FILM ______ TARGET CONTRAST ______ FILTER ______

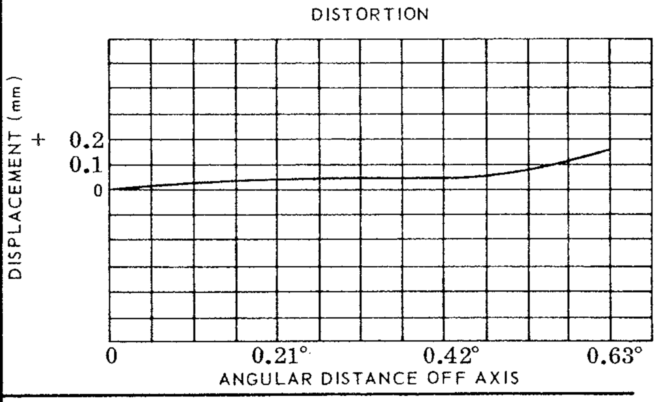
RADIAL																		
TANGENTIAL																		

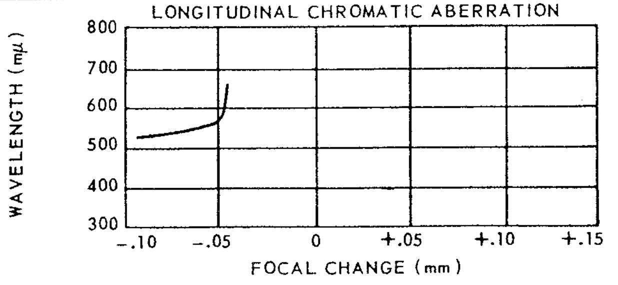
AWAR ______ L/mm

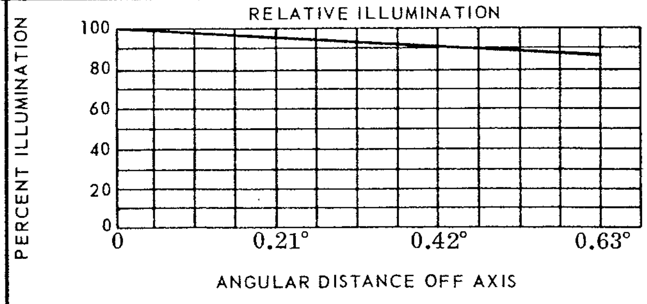
VISUAL ______ TARGET CONTRAST ______ FILTER ______

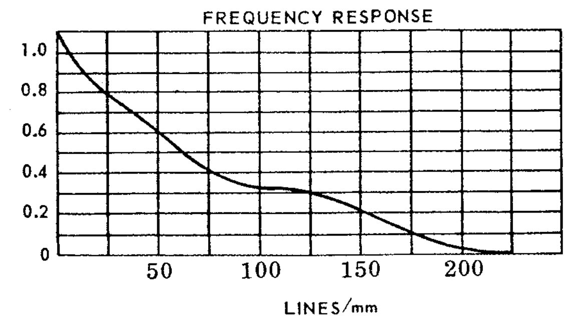
RADIAL																		
TANGENTIAL																		

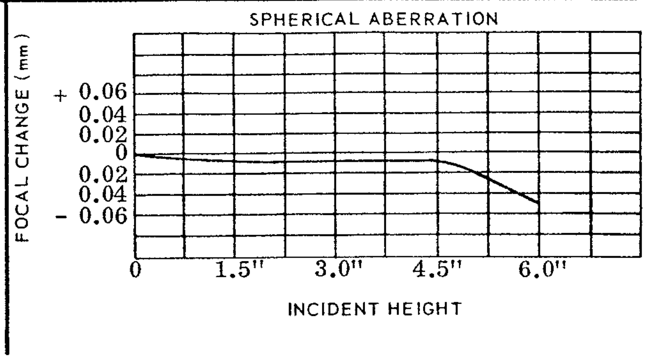

ASTIGMATISM AND CURVATURE OF FIELD


DISTORTION


LONGITUDINAL CHROMATIC ABERRATION


RELATIVE ILLUMINATION


FREQUENCY RESPONSE


SPHERICAL ABERRATION